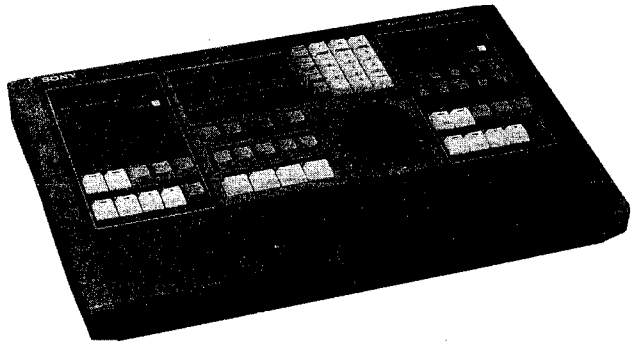
SONY

DIGITAL AUDIO EDITOR

RM-D7300



MAINTENANCE MANUAL

1st Edition(Revised 5)

Serial No. 20001 and Higher (UC)

Serial No. 50001 and Higher (EK)

WARNING

For the customers in U.S.A.

This equipment generates, uses, and can radiate radio frequency energy and if not installed and used in accordance with the instructions manual, may cause interference to radio communications. It has been tested and found to comply with the limits for a Class A computing device pursuant to Subpart J of Part 15 of FCC Rules, which are designed to provide reasonable protection against such interference when operated in a commercial environment. Operation of this equipment in a residential area is likely to cause interference in which case the user at his own expense will be required to take whatever measures may be required to correct the interference.

Important—To insure that the complete system (including this peripheral) is capable of complying with the FCC requirements, it is recommended that the user make sure that the individual equipment of the complete system has a label with one of the following statements.

"This equipment has been tested with a Class A Computing Device and has been found to comply with Part 15 of FCC rules."

—or—

"This equipment complies with the requirements in Part 15 of FCC rules for a Class A Computing Device."

—or equivalent.

The shielded interface cable recommended in this manual must be used with this equipment in order to comply with the limits for a computing device pursuant to Subpart J of Part 15 of FCC Rules.

For the customers in Canada

This apparatus complies with the Class A limits for radio noise emissions set out in Radio Interference Regulations.

Pour les utilisateurs au Canada

Cet appareil est conforme aux normes Classe A pour bruits radioélectriques, spécifiés dans le Réglement sur le brouillage radioélectrique.

SAFETY CHECK-OUT

After correcting the original service problem, perform the following safety checks before releasing the set to the customer:

Check the metal trim, "metallized" knobs, screws, and all other exposed metal parts for AC leakage. Check leakage as described below.

LEAKAGE TEST

The AC leakage from any exposed metal part to earth ground and from all exposed metal parts to any exposed metal part having a return to chassis, must not exceed 3.5 mA. Leakage current can be measured by any one of three methods.

1. A commercial leakage tester, such as the Simpson 229 or RCA WT-540A. Follow the manufacturers' instructions to use these instruments.

2. A battery-operated AC milliammeter. The Data Precision 245 digital multimeter is suitable for this job.

3. Measuring the voltage drop across a resistor by means of a VOM or battery-operated AC voltmeter. The "limit" indication is 5.25 V, so analog meters must have an accurate low-voltage scale. The Simpson 250 and Sanwa SH-63Trd are examples of a passive VOM that is suitable. Nearly all battery operated digital multimeters that have a 20 V AC range are suitable. (See Fig. A)

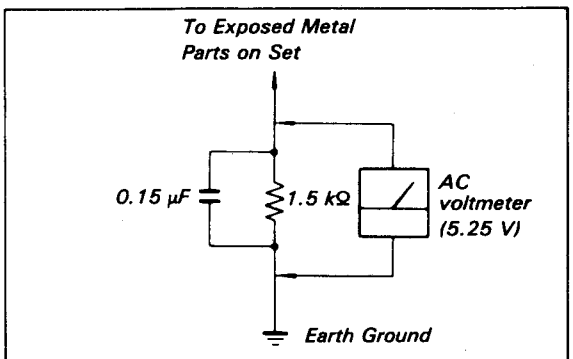


Fig. A. Using an AC voltmeter to check AC leakage.

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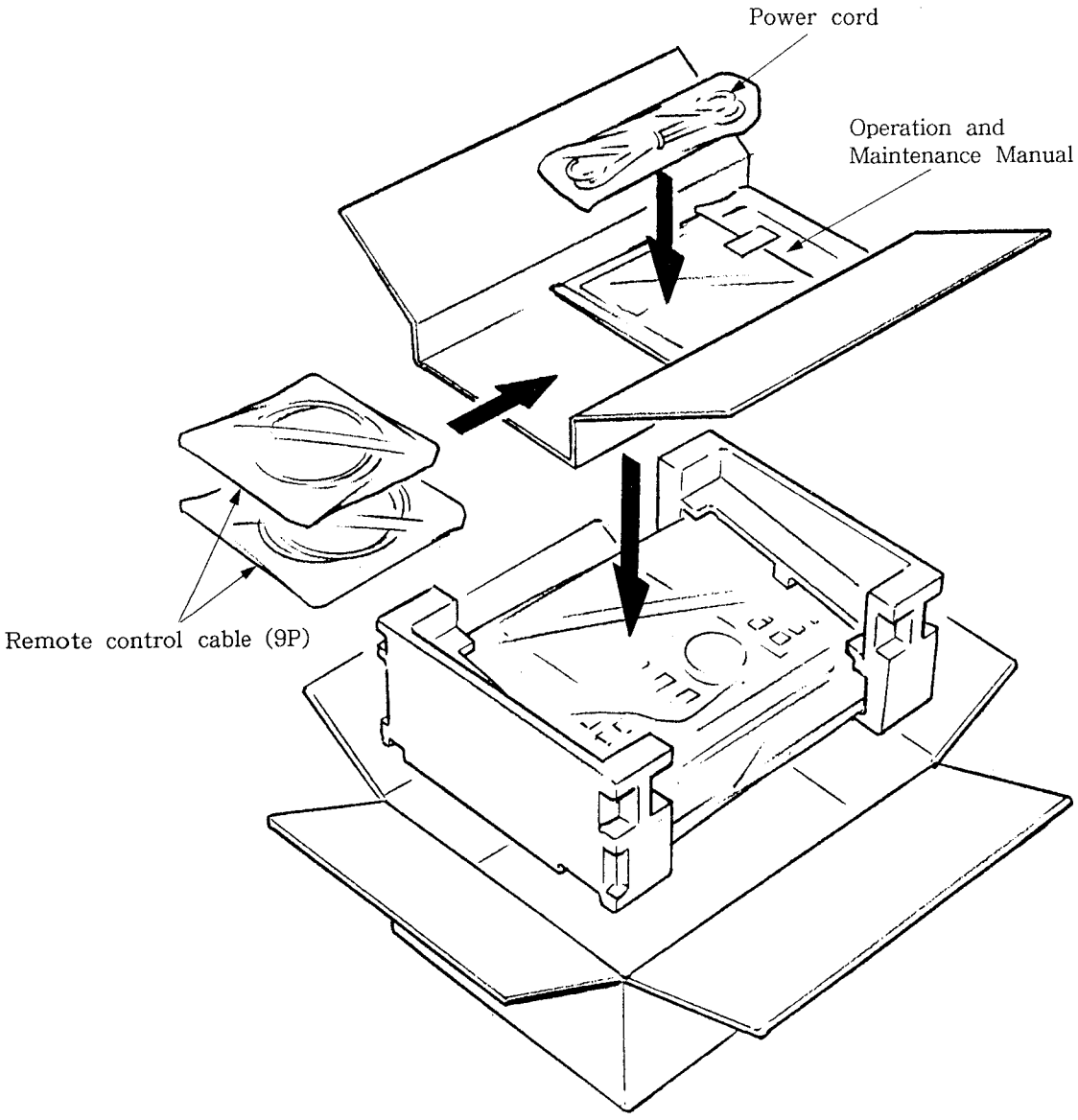
SECTION1
INSTALLATION

1-1. UNPACKING AND REPACKING



1-2. OPERATING ENVIRONMENT AND INSTALLATION SPACE

Install the RM－D7300 while paying attention to the environment and installation space as follows.

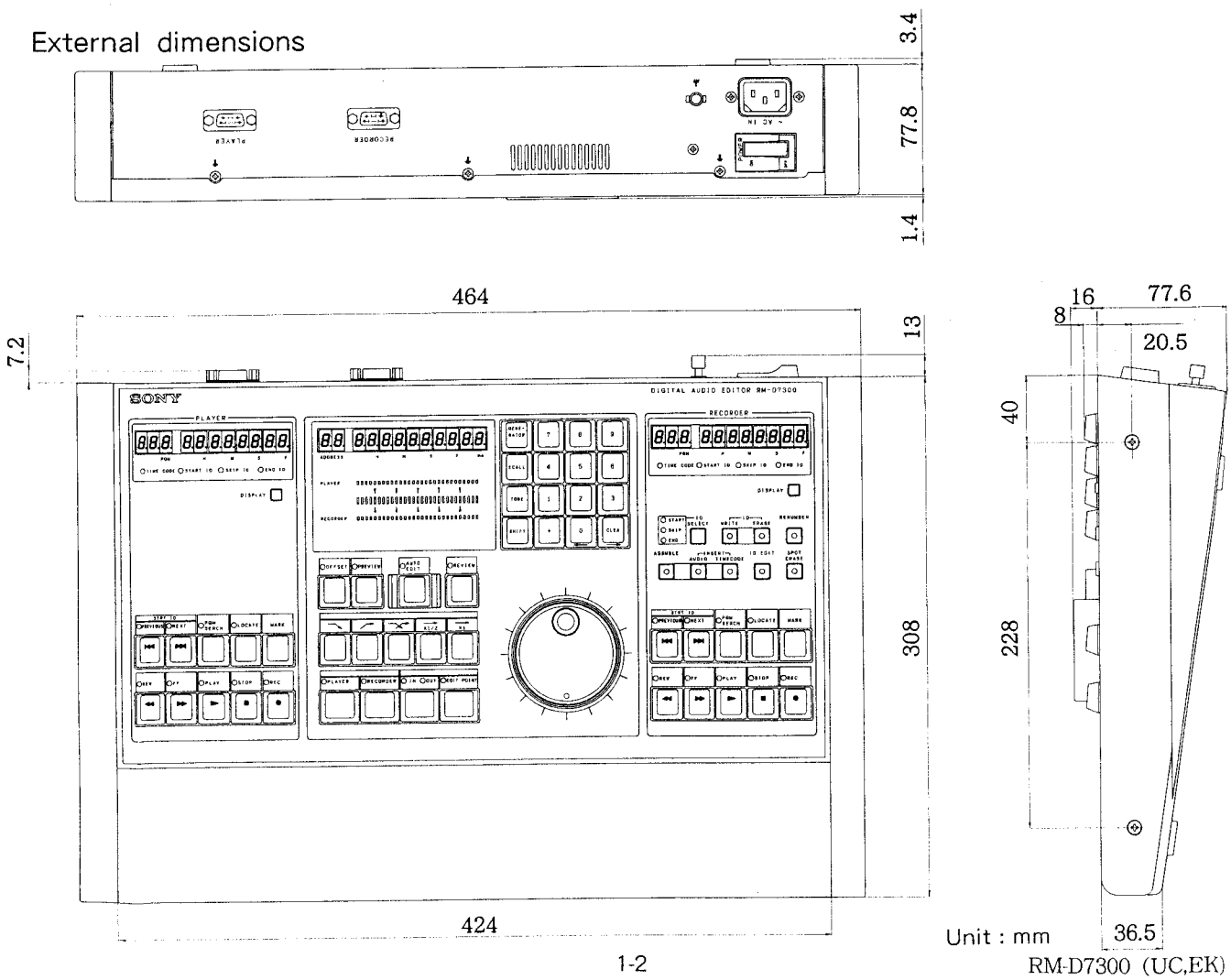
1-2-1. Operating environment

1. Do not install in a place where exposed to direct sunlight or strong light, or subject to excessive dust or vibratetion, or with strong electrical or magnetic fields.
2. To prevent the temperature in side the set from rising, pay attention to the air circulation where it is installed.
3. Since the operating temperature range within the set is 5° to 40℃, do not install next to a heat source.

1-2-2. Installation space

1. The dimensions of the set are as in the figure below.
2. For the purposes of ventilation and servicing, place the rear of the unit at least 40 cm away from a wall.
3. When using on a desk, leave a space of at least 40 cm above the top panel to allow for the servicing of the printed circuit board.

External dimensions



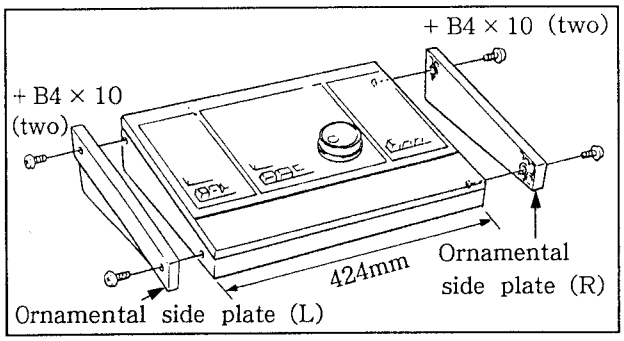
1-3. POWER REQUIREMENTS

A switching regulator is used as the power source for the RM-D7300. There is thus no need to change over the mains voltage setting for difficult mains voltages.

Power Line Voltage : AC 100 to 240 V
Power Line Frequency : 50/60 Hz
Power Line Consumption : 10 W

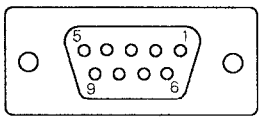
1-4. NOTE WHEN MOUNTING ON A 19-INCH STANDARD RACK

Remove the left and right ornamental side plates of the RM-D7300 to mount the unit in a 19-inch standard rack.



1-5. INPUT/OUTPUT SIGNALS FOR CONNECTORS

RECORDER connector : D-Sub 9-pin, female
PLAYER connector : D-Sub 9-pin, female



– EXT VIEW –

Remote 9-pin (RS-422 Standard)

PIN	Controlling Device (RECORDER, PLAYER connector of RM-D7300)	Controlled Device
1	Frame Ground	Frame Ground
2	Receive A	Transmit A
3	Transmit B	Receive B
4	Transmit Common	Receive Common
5	Spare	Spare
6	Receive Common	Transmit Common
7	Receive B	Transmit B
8	Transmit A	Receive A
9	Frame Ground	Frame Ground

1-6. CONNECTING CABLES

For installation and maintenance servise, use the cables specified below or equivalent cables to connect the connector on the connector panel.

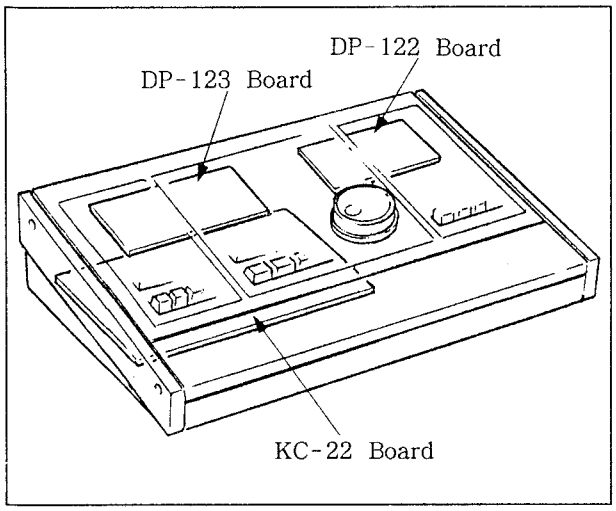
Connector on the connector panel	Type of the connecting cable
RECORDER	Remote control cable 9-pin RCC-5G (5 m) RCC-10G (10 m) RCC-30G (30 m)
PLAYER	

1-7. ACCESSORIES SUPPLIDE

POWER CORD (UC) ; 1
POWER CORD (EK) ; 1
REMOTE CONTROL CABLE 9P ; 2
OPERATION MANUAL ; 1
MAINTENANCE MANUAL ; 1

SECTION2
SERVICE INFORMATION

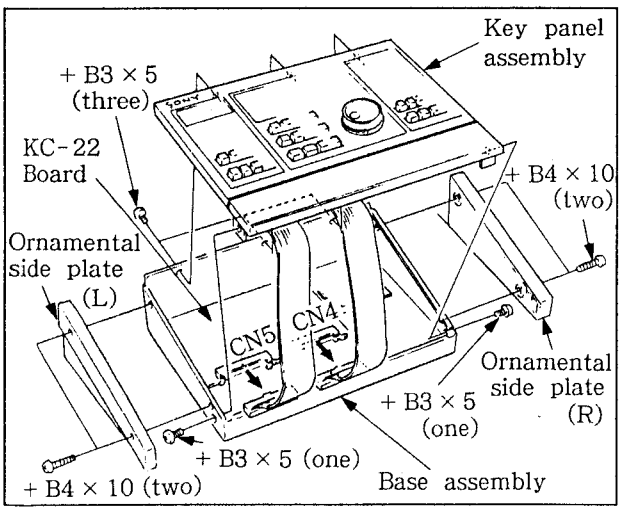
2-1. BOARDS LOCATION



2-2 KC-22 BOARD REPLACEMENT

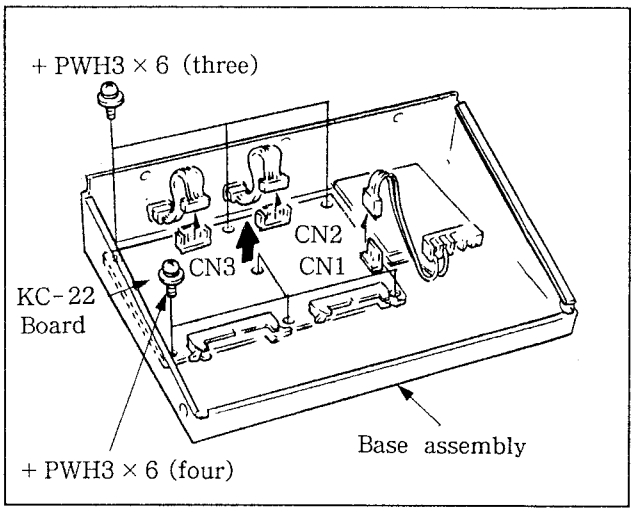
(1) Remove the ornamental side plates (L) and (R) from the base assembly (+B4 x 10, 4 pcs.).

(2) Remove the key panel assembly from the base assembly
(+B3 x 5, 5 pcs, CN4 and CN5).

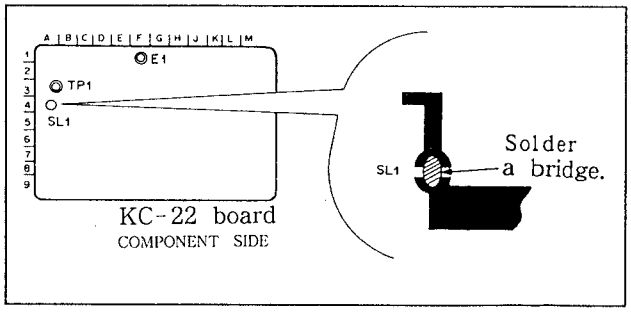


(3) Remove the harnesses from CN1, CN2, and CN3 connectors of the KC-22 board.

(4) Remove the KC-22 board from the base assembly (installation screws + PWH 3 x 6, 7 pcs.).



(5) Before installing a new KC-22 board on the base assembly, solder the solder slit (SL1) on the component side of the KC-22 board.



(6) Using a DC voltmeter, verify that the DC voltage at TP1 and E1 on the KC-22 board is at least 2.5V.

(7) After checking the voltage, install the new KC-22 board on the base assembly (screws + PWH 3 x 6, 7 pcs.).

(8) Connect harnesses to CN1, CN2, and CN3 connectors on the KC-22 board.

(9) Install the key panel assembly (screws + B3 x 5, 5pcs, CN4 and CN5), then the ornamental side panels (L) and (R)(screws+ B4 x 10, 2 pcs. for each side) on the base assembly.

(10) While simultaneously pressing the [SHIFT] key and [CLEAR] key on the editor controller of the key panel, turn ON the power switch. By this operation, the back-up memory will be set to the factory setting.

(11) Make sure that LEDs will light up in sequence from the player control unit to the recorder control unit.

(12) Turn the power off then turn it back on.

(13) While pressing the [SHIFT] key on the editor controller, press the [STORE] key (command mode setting). In the work area of the display area on the editor controller, check for display of "0" on the 10th digit from the right. (This means that the memory back-up has been done normally.) Then turn the power off.

2-3. LITHIUM BATTERY (BT1) REPLACEMENT

This section describes the replacement of back-up lithium battery (BT1) on the KC-22 board.

Checking the replacement timing of lithium battery (BT1)

While pressing the [SHIFT] key on the editor controller of the key panel, press the [STORE] key(command mode setting). In the work area of the display area on the editor controller, check for display of "E" on the 10thdigit from the right. If "E" is displayed, it is time to replace the battery.

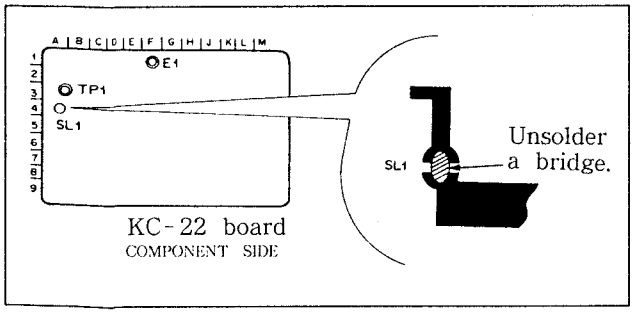
REPLACEMENT PROCEDURE

(1) Turn the power off.

(2) Turn the power back on. After ten seconds, turn the power off. The backup capacitor (C10) on the KC -22 board will be fully charged.

(3) Remove the KC-22 board from the main unit. (Refer to Section "2-2. KC-22 BOARD REPLACEMENT".)

(4) Unsolder a bridge across the solder slit (SL1) on the component side of the KC-22 board.



(5) Measure the voltage between the electrodes on the new lithium battery (BT1) to make sure that the voltage is at least +2.6 Vdc.

(6) Remove the old lithium battery (BT1) from the KC-22 board (lead terminals at three locations) and install the new lithium battery (BT1) on the KC-22 board.
Note: Do not short-circuit the positive and negative polarity of the lithium battery (BT1).

(7) Install the KC-22 board on the main unit (for installation procedure, refer to section "2-2. KC-22 BOARD REPLACEMENT").

(8) Turn the power on. Make sure that LEDs will light up in sequence from the player control unit to the recoraer control unit.

(9) While pressing the [SHIFT] key on the editor controller of the connector panel, press the [STORE] key (command mode setting). In the work area of the display area on the editor controller, check for display of "0" on the 10th digit from the right. (This means that the memory back-up has been done normally.) Then turn the power off.

2-4. SELF-DIAGNOSIS

RM-D7300 has a built-in self-diagnosis program to checked for failures. If the unit does not seem to operate properly after a repair or board replacement, execute this diagnosis program.

Program 1:
Check the LED indicators on the key panel

PROCEDURE

(1) While pressing the [SHIFT] key and [1] key on the editor controller of the key panel at the same time, turn the power on.
(2) Make sure that all the LED indicators on the key panel are lit.
(3) Turn the power off.

Program 2:
Check the key switches. This program is effective only on the equipment completed Program 1, LED indicator check.

PROCEDURE

(1) While pressing the [SHIFT] key and [2] key on the editor controller of the key panel at the same time, turn the power on.
CHECK
Confirm that the digit furthest to the right on the display of the player control (PLAYER) of the key panel changes from 0 through F (HEX display).
(2) Press the [DISPLAY] key on the player control (PLAYER).
CHECK
Repeatedly press the [DISPLAY] key. Confirm that the player control (PLAYER) display moves to the left one digit at a time and changes from 0 through F (HEX display). Perform this process to the digit furthest to the left.
(3) Press the [MARK] key on the player control (PLAYER) a few times (four times or more).
CHECK
Confirm that the TIME CODE, START ID, SKIP ID, and END ID indicators on the player (PLAYER) control light one after another.
(4) Press the key switches (nine locations) of player control (PLAYER) shown in the table below.
CHECK
Confirm that while each key switch is held down the corresponding LED indicator lights.
Note:
The LED indicators are located above the key switches.

Key switch	LED indicator
START ID PREVIOUS (|◀◀)	PREVIOUS Lit
START ID NEXT (▶▶|)	NEXT Lit
PGM SEARCH	PGM SEARCH Lit
LOCATE	LOCATE Lit
REW (◀◀)	REW Lit
FF (▶▶)	FF Lit
PLAY (▶)	PLAY Lit
STOP (■)	STOP Lit
REC (●)	REC Lit

Note: Each LED indicator is located on the corresponding key switch.

(5) Press the key switches (13 locations) on the editor controller of the key panel shown in the table below.

CHECK

Confirm that while each key switch is held down the corresponding LED indicator lights or extinguishes. (refer to the table below.)

Key switch	LED indicator
OFFSET	OFFSET Lit
PREVIEW	PREVIEW Lit
AUTO EDIT	AUTO EDIT Lit
REVIEW	REVIEW Lit
MEMORY REHEARSAL (↘)	PLAYER Lit
MEMORY REHEARSAL (↗)	RECORDER Lit
MEMORY REHEARSAL (↗↘)	IN Off
MEMORY REHEARSAL (×½)	OUT Lit
MEMORY REHEARSAL (×1)	EDIT POINT Lit
MONITOR PLAYER	PLAYER Lit
MONITOR RECORDER	RECORDER Lit
EDIT MODE IN/OUT	IN Off OUT Lit
EDIT POINT	EDIT POINT

(6) Turn the editor controller dial on the key panel in clockwise direction.

CHECK

Confirm the following operation: The lit LED dot in the upper row of the LED bar graph in the display area of the Key panel moves one at a time to the right. Next, the LED in the middle row lights one dot at time. After all LEDs are turned on, they turn off one dot at a time. After all LEDs are turned off, the lit LED dot moves one dot at a time to the right.

(7) Turn the editor controller dial in the counterclockwise direction.

CHECK

As with procedure (6), confirm the movement of LED in the LED bar graph.

(8) As shown in the table below, press each key switch (16 locations) in the function/number key rows on the editor controller.

CHECK

By referring to the table below, confirm that the number or character corresponding to each key switch is displayed on the seven-segment display.

Key switch	Seven-segment display
1	1
2	2
3	3
4	4
5	5
6	6
7	7
8	8
9	9
GENERATOR	GEn
RECALL	rCL
STORE	Sto
SHIFT	SH.
+	(Decimal point)
0	0
CLEAR	CLr

(9) Press the [DISPLAY] key on the recorder controller (RECORDER) of the key panel.

CHECK

Repeatedly press the [DISPLAY] key. Confirm that the recorder controller (RECORDER) display moves to the left one digit at a time and changes from 0 through F (HEX display). Perform this process to the digit furthest to the left.

(10) Press the [MARK] key on the recorder controller (RECORDER) a few times (four times or more).

CHECK

Confirm that the TIME CODE, START ID, SKIP ID, and END ID indicators on the recorder controller light one after another.

(11) Press the key switches (eight locations) of recorder controller (RECORDER) shown in the table below.

CHECK

Confirm that when each key switch is pressed, the corresponding LED indicator lights.

Key switch	LED indicator
ID WRITE	ID WRITE Lit
ID ERASE	ID ERASE Lit
RENUMBER	RENUMBER Lit
ASSEMBLE	ASSEMBLE Lit
INSERT AUDIO	INSERT AUDIO Lit
INSERT TIME CODE	INSERT TIME CODE Lit
ID EDIT	ID EDIT Lit
SPOT ERASE	SPOT ERASE Lit

(12) Press each switch pressed in procedure (11).

CHECK

Confirm that the LED indicator corresponding to each pressed key turns off.

(13) Press the [ID SELECT] key of the recorder controller(RECORDER) a few times (three times or more).

CHECK

Confirm that the START, SKIP and END indicators on the recorder controller light one after another.

(14) Press the key switches (nine locations) of the recorder controller (RECORDER) as shown in the table below.

CHECK

Confirm that when each key switch is pressed, the corresponding LED indicator lights.

Key switch	LED indicator
START ID PREVIOUS (|◀◀)	PREVIOUS Lit
START ID NEXT (▶▶|)	NEXT Lit
PGM SEARCH	PGM SEARCH Lit
LOCATE	LOCATE Lit
REW (◀◀)	REW Lit
FF (▶▶)	FF Lit
PLAY (▶)	PLAY Lit
STOP (■)	STOP Lit
REC (●)	REC Lit

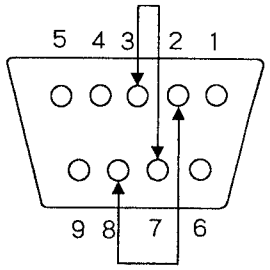
(15) Turn off the power.

Program 3:

Check the connection of 9-pin connectors(PLAYER and RECORDER). This process may be substituted by a 9-pin check using PCM-7050 or PCM-7030.

PROCEDURE

(1) Confirm that the power is off. Short-circuit pin 2 and pin 8, and pin 3 and pin 7, of PLAYER (9 pin connector) and RECORDER (9 pin connector).



9pin connector

(2) While pressing the [SHIFT] key and [3] key of the editor controller, turn the power on.
CHECK
Confirm that "9P PASS" is displayed on the player controller and recorder controller displays.
(3) Turn the power off.

Program 4:
This mode is not a part of the diagnosis program, but a mode for initializing the RAM.
PROCEDURE
(1) While pressing the [SHIFT] key and [CLEAR] key of the editor controller at the same time, turn the power on. This process sets the backup memory to the factory setting.
(2) Turn the power off.

REMOTE 9 PIN CHECK USING PCM-7050 and PCM-7030
While remote 9 pins (PLAYER and RECORDER) can be checked with Program3, when PCM-7050 or PCM-7030 is available, perform the 9 pin check according to the following procedure.
PROCEDURE
(1) Connect the PLAYER connector (9P) of RM-D7300 with the REMOTE (9P) connector of PCM-7050 (or PCM-7030).
(2) Set the REMOTE/LOCAL switch on the front panel of PCM-7050 (PCM-7030) to REMOTE.
(3) Turn on the power of RM-D7300 and PCM-7050 (PCM-7030).
(4) Insert a recorded cassette into PCM-7050 (PCM-7030).
(5) Press the [PLAY] key of the player controller of RM-D7300. Confirm that the LED indicator for the PLAY key lights and the recorded cassette inserted into PCM-7050 (PCM-7030) is played back. After performing this process, stop the playback by pressing [STOP] key.
(6) Turn off the power of RM-D7300 and PCM-7050 (PCM-7030).
(7) Remove the connector from the PLAYER connector (9P) of RM-D7300, and connect it to the RECORDER connector(9P).
(8) Turn on the power of RM-D7300 and PCM-7050 (PCM-7030).
(9) Press the [PLAY] key of the recorder controller of RM-D7300. Confirm that the LED indicator for the PLAY key lights and the recorded videocassette inserted into PCM-7050 (PCM-7030) is played back. After performing this process, stop the playback by pressing [STOP] key.
(10) Turn off the power of RM-D7300 and PCM-7050 (PCM-7030). Remove the connector from the RECORDER connector (9P) of RM-D7300 and the REMOTE connector(9P) of PCM-7050 (PCM-7030).

SECTION A
BLOCK DIAGRAM

OUTLINE OF CIRCUITS

RM-D7300 is composed of the following boards:

KC-22 board : 1 pc.

KEYBOARD UNIT(KY-193 board): 1 pc.

DP-122 board: 1 pc.

DP-123 board: 1 pc.

KC-22 Board

When a key is pressed, the controller sends this input as a 9 pin command to the player, recorder, etc. In return, the controller receives the status from the player, recorder, etc., and displays the status. This operation is controlled by KC-22 board.

Key data sampling is performed on up to sixteen keys at a time in 2 msec. All the keys are scanned when this is performed eight times. For LED display operation, up to 64 LEDs are lit at a time for 2 msec. All LEDs are lit when this is performed eight times. "Dynamic Drive /Scan Timing Generator" generates the timing signals for these operations.

"Key Data Latch" and "LED Data Latch" timing signals are used to latch key data and LED data, respectively.

"Rotary Encoder Interface" interfaces dial information to data bus. This dial information is read once during a key scan taking approximately 16 msec. The 9 pin command and status of player and recorder are connected to the MPU, which is the nucleus of the process, over SCU interface circuit.

KEYBOARD UNIT(KY-193 board)

KY-193 board is mounted with keys and their respective LEDs. This board also relays signals between DP-122/ DP-123 or rotary encoder and KC-22 board.

DP-122 board/DP-123 board

DP-122/DP-123 boards are mounted with a 7-segment LED and bar LED that display time codes and editing position. Control signals are sent to these boards from KC-22 board via KY-193 board.

Data, cross-fade time, etc., that can be revised by key input are stored in RAM. The RAM has a back-up function of preserving data for at least 48 hours after the power is turned off. After 48 hours, the data arepreserved by a battery.

OVERALL

REAR PANNEL

PLAYER

RECORDER

AC100-240V 50/60HZ

SWITCHING POWER SUPPLY

DC5V 2A

CN1

9P-CN CN3 for PLAYER

9P-CN CN2 for RECORDER

ICM1

ICM4

COMMUNICATION CLOCK

SCU

X2;ICL3

9P INTERFACE

CONTROL BUS

ADDRESS BUS

DATA BUS

CYCLE OUT

CLOCK

LED/KEY DATA BUFFER

DYNAMIC DRIVE/SCAN TIMING GENERATOR

ICH6

ADDRESS&CHIP SELECT

DATA

ROTARY ENCODER INTERFACE

ICH7

PHASE A/PHASE B

ROTARY

C

ICA6,M7

LED DATA LATCH

LED DRIVER

ICA8,B8,C8,E8,G8,J8,K8,M8

LED DRIVER

Q1-Q8

DRIVE LINE

DATA LATCH

KEYBOARD-CN

CN5

CN2

KEY SELECT LINE DRIVER

ICG8

KEYBOARD-CN

CN4

CN1

KEY DATA LATCH

ICC8,E6,E7,J7

KEYBOARD INTERFACE

ICC3,D2,D3,L3

ADDRESS DECODER

ICK4

TIMER COUNTER UNIT

CONTROL BUS

ADDRESS BUS

DATA BUS

SCU

INTERRUPT CONTROLLER

COUNTER/TIMER

V50 MPU

20MHz X1

RESET ICM3

ICJ3

ADDRESS LATCH

ICE2,G2,G3

DATA BUS BUFFER

ICF2,F3

ICF4

ROM

ICB4,D4

RAM

SWITCHES

S2;ICK5

LEDS

ADDRESS DECODER

C1C2,C3,D2,E3

D6,7,8;ICM5,L5

MPU BLOCK

KC-22

SWITCHING POWER SUPPLY

DC5V 2A

CN1

CYCLE OUT

CLOCK

ICK4

TIMER COUNTER UNIT

ICB4,D4

RAM

SWITCHES

S2:ICK5

LEDS

D6,7,8:ICM5,L5

LED/KEY DATA BUFFER

DYNAMIC DRIVE/SCAN TIMING GENERATOR

ICH6

ADDRESS&CHIP SELECT

DATA

ROTARY ENCODER INTERFACE

ICH7

PHASE A/PHASE B

ICA6,M7

LED DATA LATCH

LED DRIVER

ICA8,B8,C8,E8,G8,J8,K8,M8

LED DRIVER

DRIVE LINE

DATA LATCH

Q1-Q8

KEY SELECT LINE DRIVER

ICG8

KEY DATA LATCH

ICC6,E6,E7,G7

KEYBOARD-CN

CN5

KEYBOARD-CN

CN4

KEYBOARD INTERFACE

KC-22

ROTARY ENCODER

ROTARY ENCODER CN3

DP-122/123

LED/7SEG MATRIX

DP-123

CN1

CN2

LED/7SEG MATRIX

DP-122

CN1

CN6

CN5

CN4

CN2

CN1

LED MATRIX

KEY MATRIX

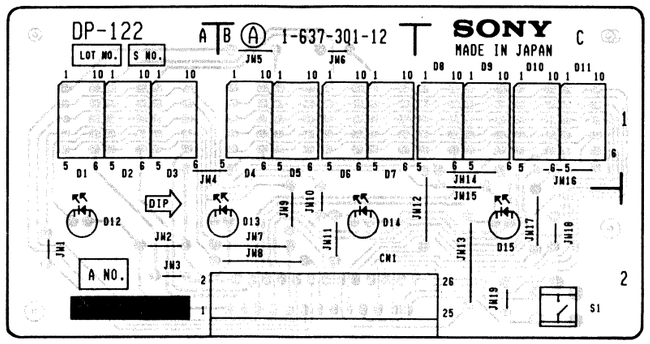
KEYBOARD UNITE

OVERALL

RM-D7300

SECTION B
SCHEMATIC AND CIRCUIT BOARD DIAGRAMS

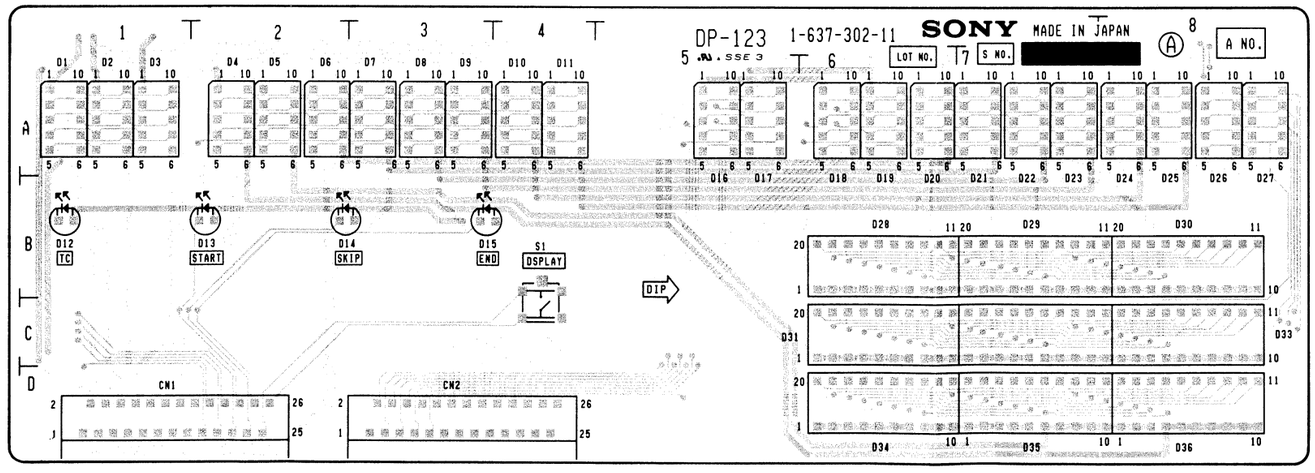
DP-122 BOARD (RM-D7300)
(1-637-301-12)
Component Side



SOLDER SIDE PATTERN 1-637-301-12

D1	A-1
D2	A-1
D3	A-1
D4	B-1
D5	B-1
D6	B-1
D7	B-1
D8	C-1
D9	C-1
D10	C-1
D11	C-1
D12	A-2
D13	B-2
D14	B-2
D15	C-2
S1	C-2

DP-123 BOARD (RM-D7300)
(1-637-302-11)
Component Side

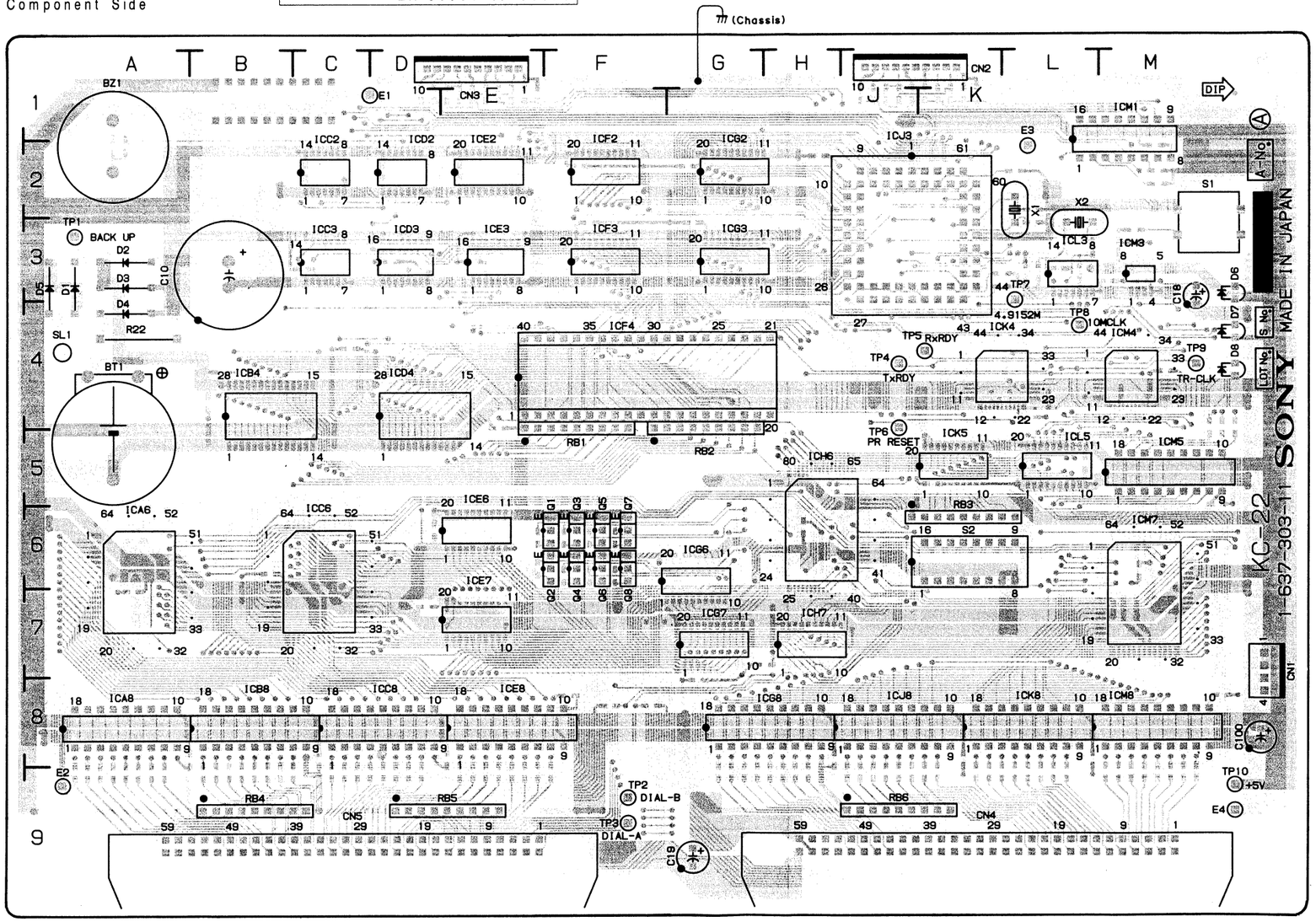


SOLDER SIDE PATTERN 1-637-302-11

D1	A-1
D2	A-1
D3	A-1
D4	A-2
D5	A-2
D6	A-2
D7	A-3
D8	A-3
D9	A-3
D10	A-4
D11	A-4
D12	B-1
D13	B-2
D14	B-3
D15	B-4
D16	A-5
D17	A-5
D18	A-6
D19	A-6
D20	A-6
D21	A-7
D22	A-7
D23	A-7
D24	A-8
D25	A-8
D26	A-8
D27	A-8
D28	B-6
D29	B-7
D30	B-8
D31	C-6
D32	C-7
D33	C-8
D34	D-6
D35	D-7
D36	D-8
S1	B-4

KC-22 BOARD (RM-D7300)
(1-637-303-11)
Component Side

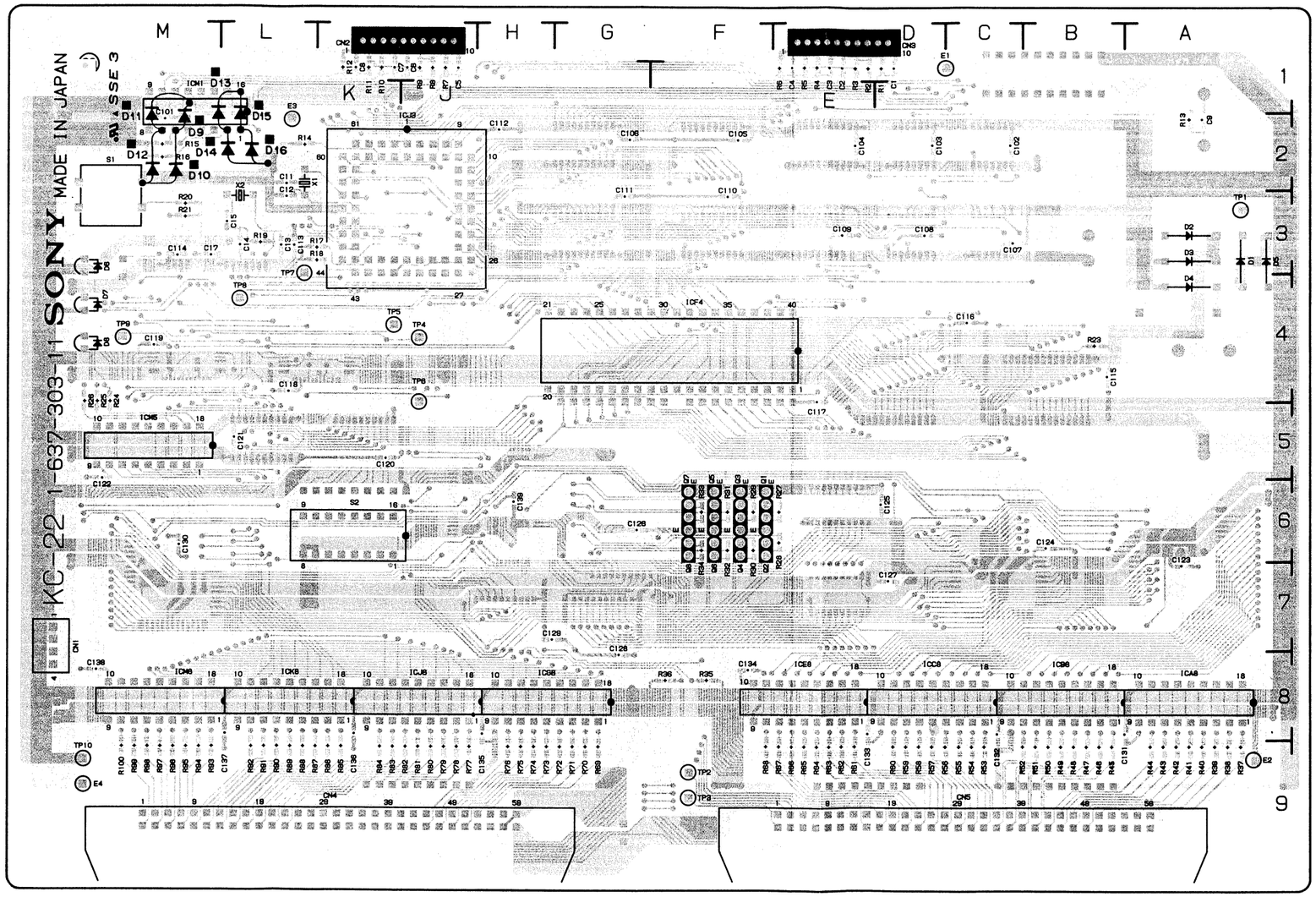
Serial No. UC 20001 to 20015
EK 50001 to 50025



D1	A-3	ICJ3	J-3
D2	A-3	ICJ8	J-8
D3	A-3	ICK4	K-4
D4	A-4	ICK5	K-5
D5	A-3	ICK8	K-8
D6	M-3	ICL3	L-3
D7	M-4	ICL5	L-5
D8	M-4	ICM1	M-1
D9	M-1	ICM3	M-3
D10	M-1	ICM4	M-4
D11	M-1	ICM5	M-5
D12	M-1	ICM7	M-7
D13	M-2	ICM8	M-8
D14	M-2		
D15	L-2	Q1	F-6
D16	L-2	Q2	F-6
		Q3	F-6
E1	D-1	Q4	F-6
E2	A-9	Q5	F-6
E3	L-1	Q6	F-6
E4	M-9	Q7	F-6
		Q8	F-6
ICA6	A-6		
ICA8	A-8	TP1	A-3
ICB4	B-4	TP2	F-9
ICB8	B-8	TP3	F-9
ICC2	C-2	TP4	J-4
ICC3	C-3	TP5	K-4
ICC6	C-6	TP6	J-6
ICC8	C-8	TP7	L-3
ICD2	D-2	TP8	L-4
ICD3	D-3	TP9	M-4
ICD4	D-4	TP10	M-9
ICE2	E-2		
ICE3	E-3	X1	L-2
ICE6	E-6	X2	L-2
ICE7	E-7		
ICE8	E-8		
ICF2	F-2		
ICF3	F-3		
ICF4	F-4		
ICG2	G-2		
ICG3	G-3		
ICG6	G-6		
ICG7	G-7		
ICH6	E-6		
ICH7	E-7		

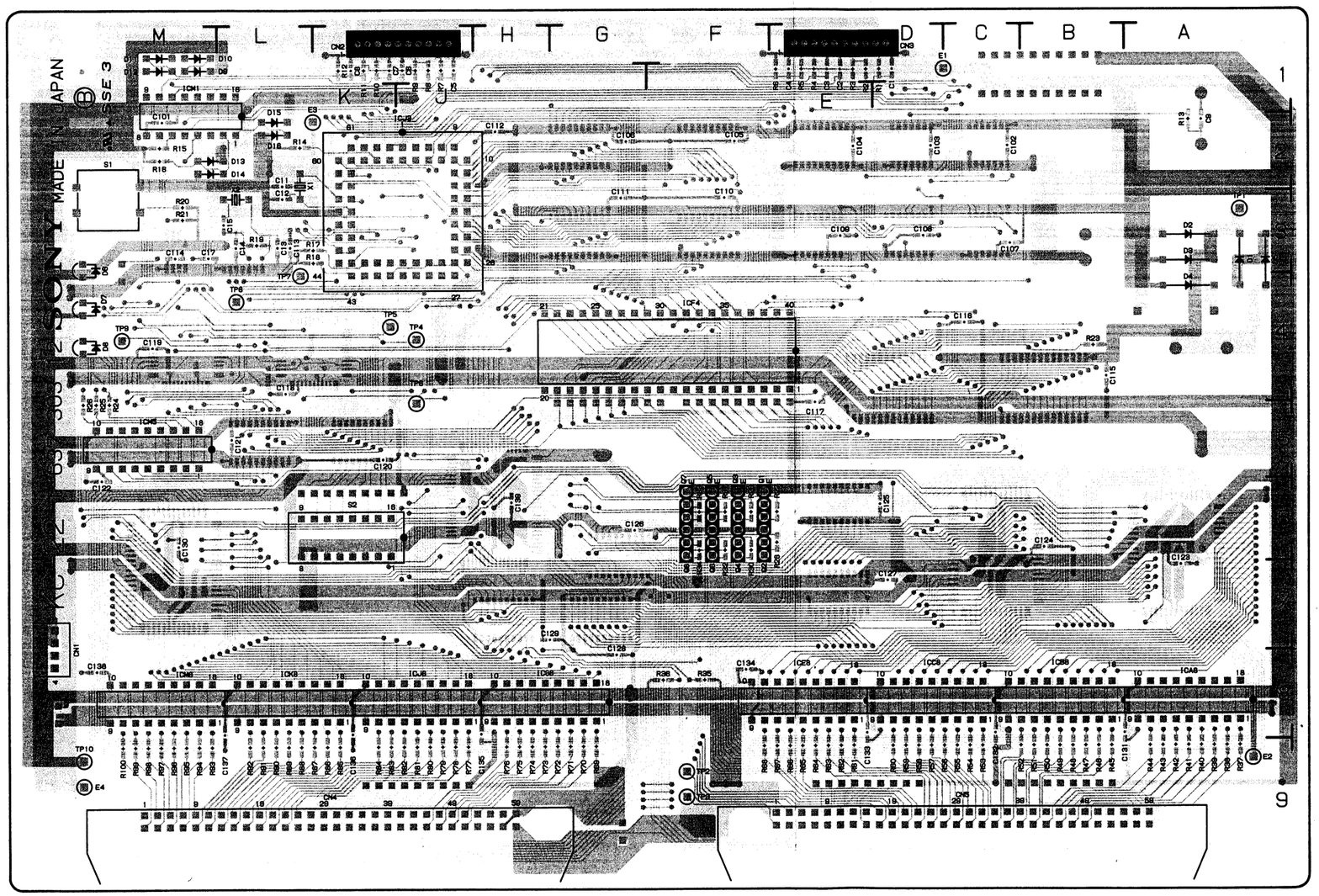
Applied Serial No. UC 20001 to 20015 EK 50001 to 50025	
Jumpers that have been soldered or cut.	GND (Pattern) —— GND(chassis)

Solder Side



Applied Serial No. UC 20001 to 20015 EK 50001 to 50025	
Parts marked with ∎ that have been installed on the solder side.	∎ D9 ∎ D14 ∎ D10 ∎ D15 ∎ D11 ∎ D16 ∎ D12 ∎ D13

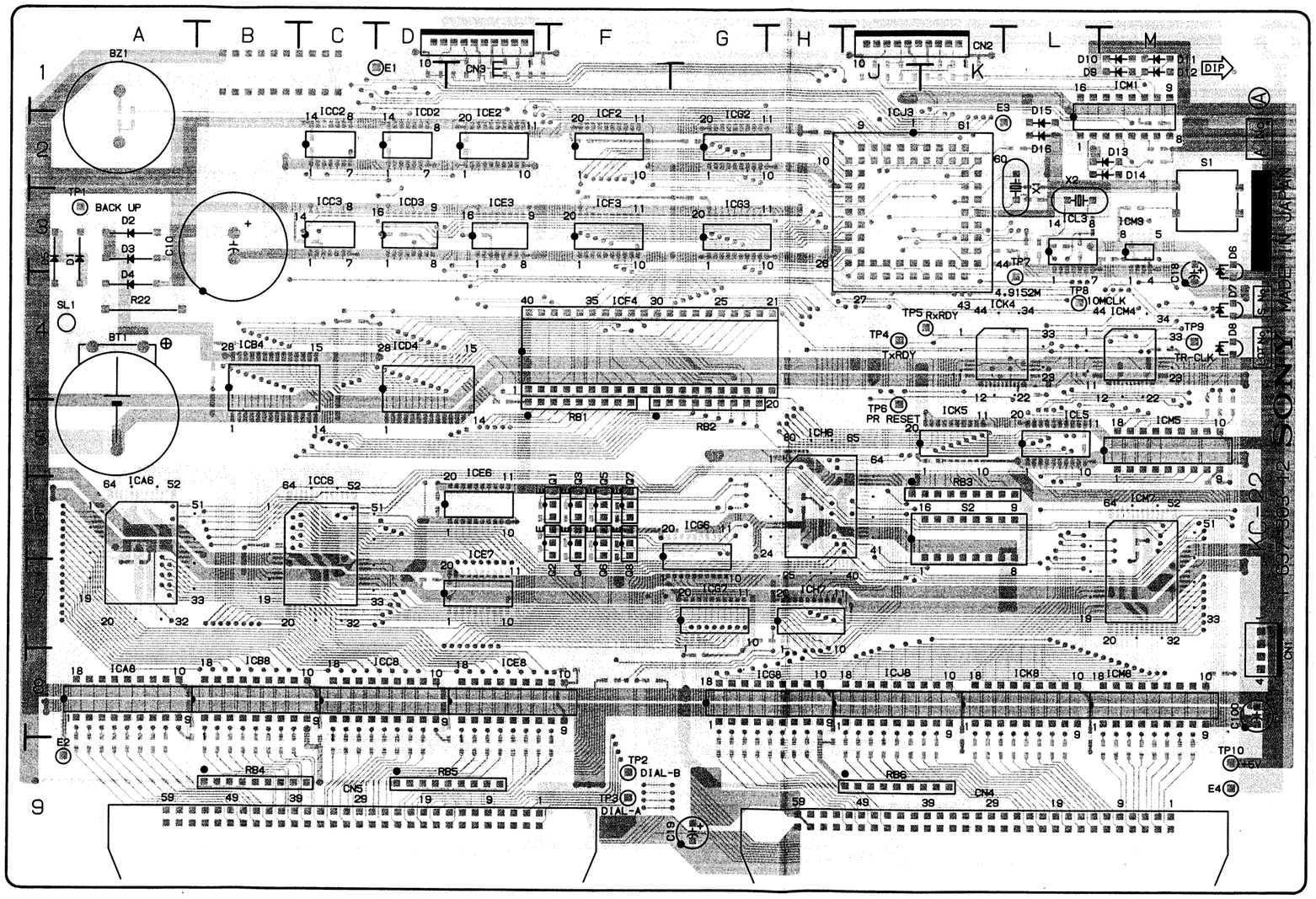
Solder Side



SOLDER SIDE PATTERN 1-637-303-12

KC-22 BOARD (RM-D7300)
(1-637-303-12)
Component Side

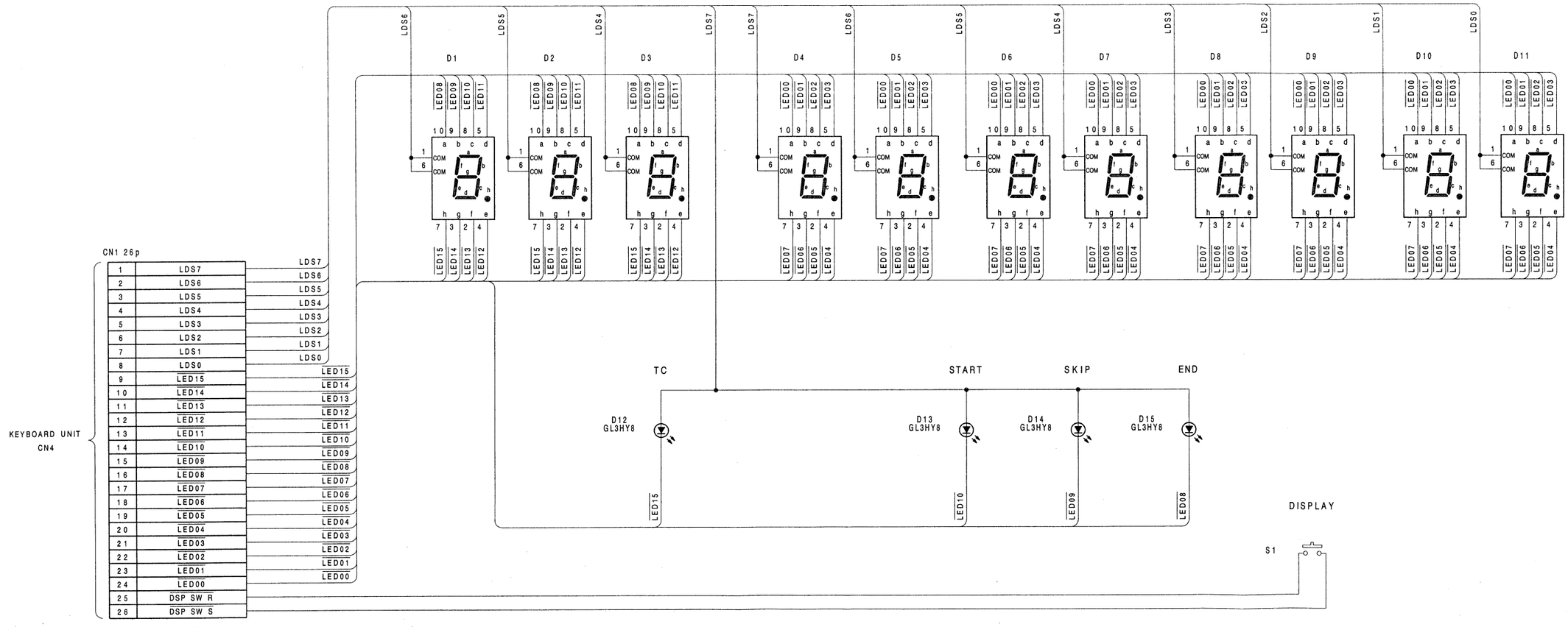
Serial No. UC 20016 and higher
EK 50026 and higher



D1	A-3	ICJ3	J-3
D2	A-3	ICJ8	J-8
D3	A-3	ICK4	K-4
D4	A-4	ICK5	K-5
D5	A-3	ICK8	K-8
D6	M-3	ICL3	L-3
D7	M-4	ICL5	L-5
D8	M-4	ICM1	M-1
D9	M-1	ICM3	M-3
D10	M-1	ICM4	M-4
D11	M-1	ICM5	M-5
D12	M-1	ICM7	M-7
D13	M-2	ICM8	M-8
D14	M-2		
D15	L-2	Q1	F-6
D16	L-2	Q2	F-6
		Q3	F-6
E1	D-1	Q4	F-6
E2	A-9	Q5	F-6
E3	L-1	Q6	F-6
E4	M-9	Q7	F-6
		Q8	F-6
ICA6	A-6		
ICA8	A-8	TP1	A-3
ICB4	B-4	TP2	F-9
ICB8	B-8	TP3	F-9
ICC2	C-2	TP4	J-4
ICC3	C-3	TP5	K-4
ICC6	C-6	TP6	J-6
ICC8	C-8	TP7	L-3
ICD2	D-2	TP8	L-4
ICD3	D-3	TP9	M-4
ICD4	D-4	TP10	M-9
ICE2	E-2		
ICE3	E-3	X1	L-2
ICE6	E-6	X2	L-2
ICE7	E-7		
ICE8	E-8		
ICF2	F-2		
ICF3	F-3		
ICF4	F-4		
ICG2	G-2		
ICG3	G-3		
ICG6	G-6		
ICG7	G-7		
ICH6	E-6		
ICH7	E-7		

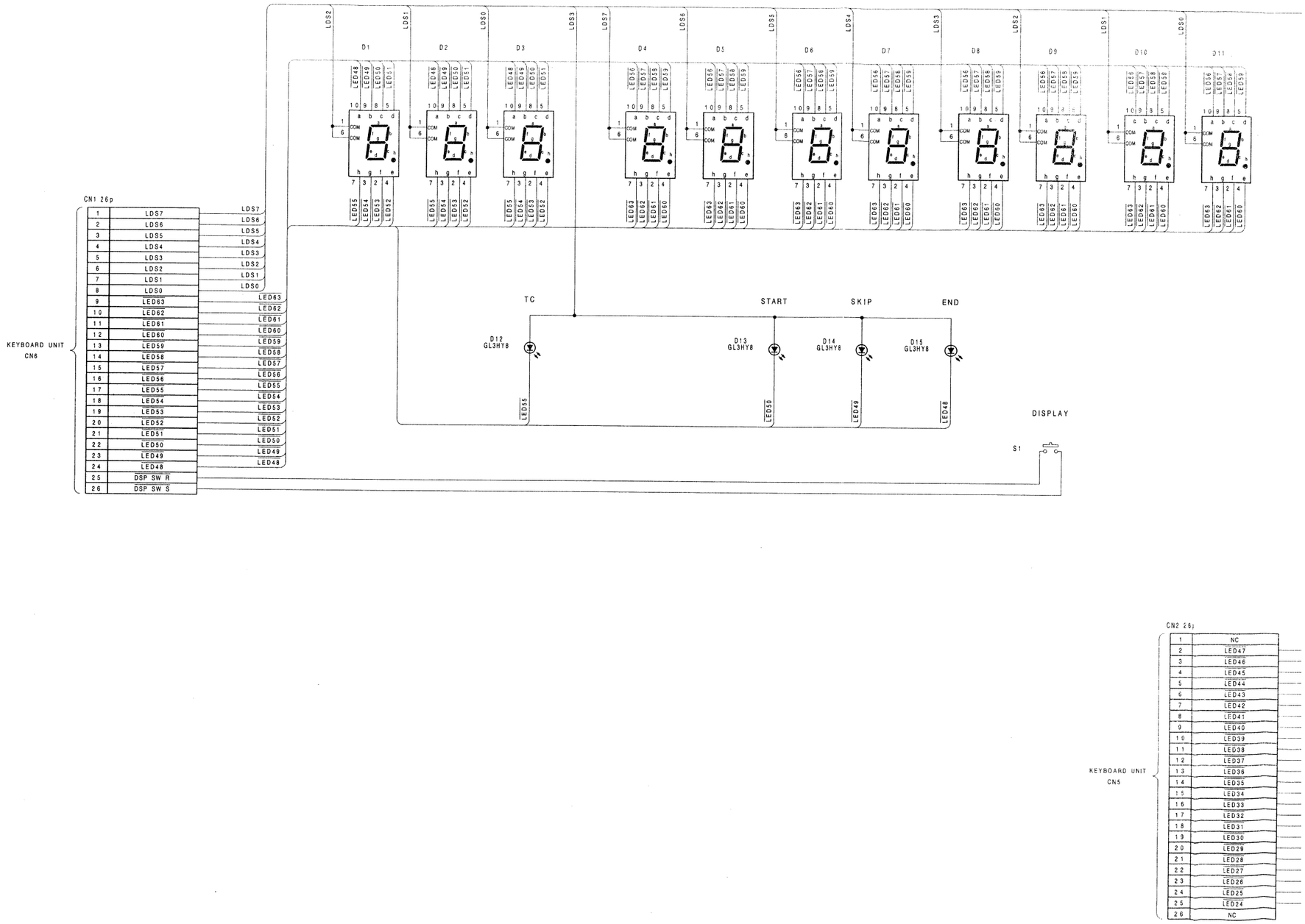
SOLDER SIDE PATTERN 1-637-303-12

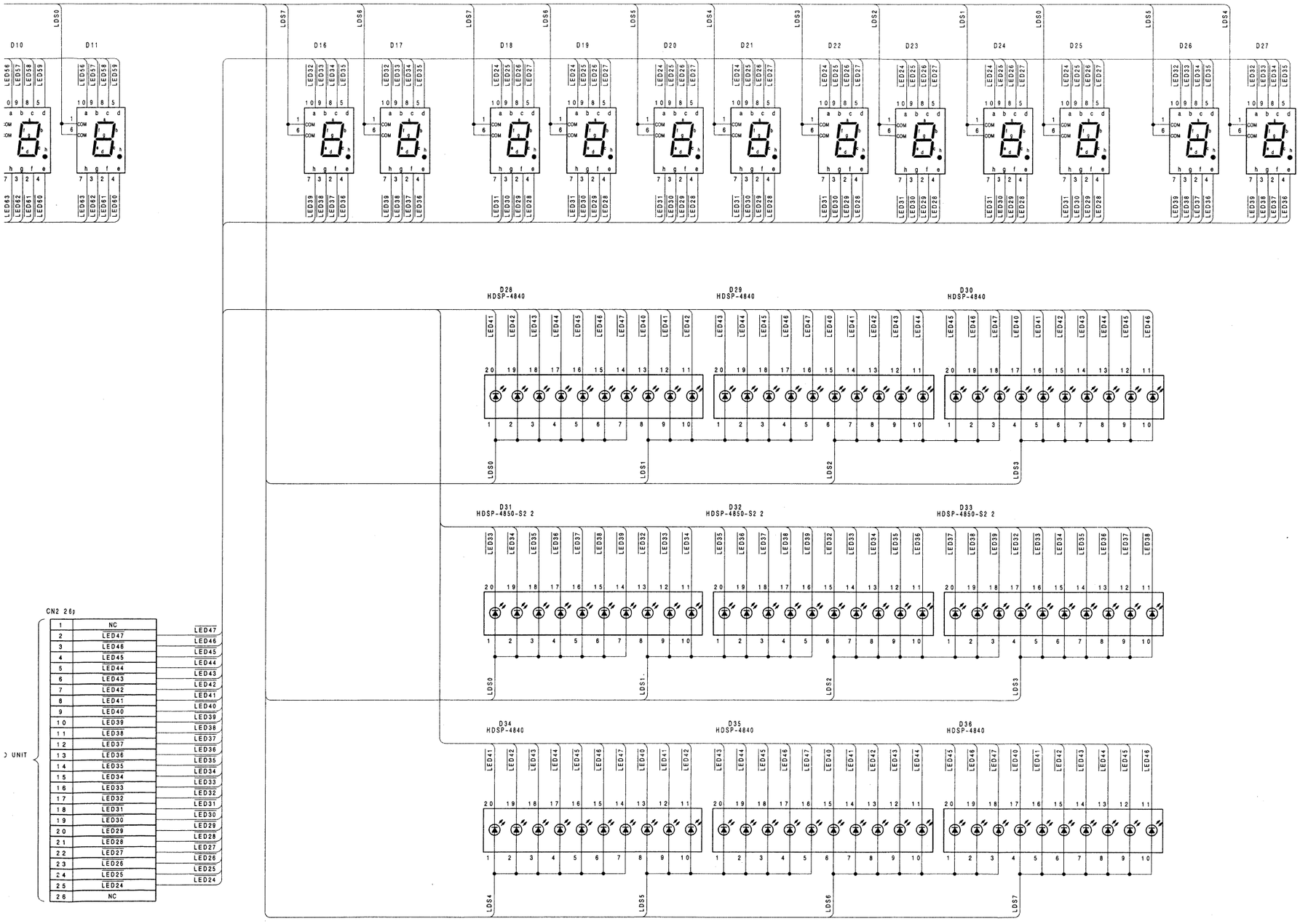
DP-122 BOARD (RM-D7300)
Display



DP-122 BOARD
BOARD NO.1-637-301-11 & HIGHER
RM-D7300

DP-123 BOARD (RM-D7300)
Display

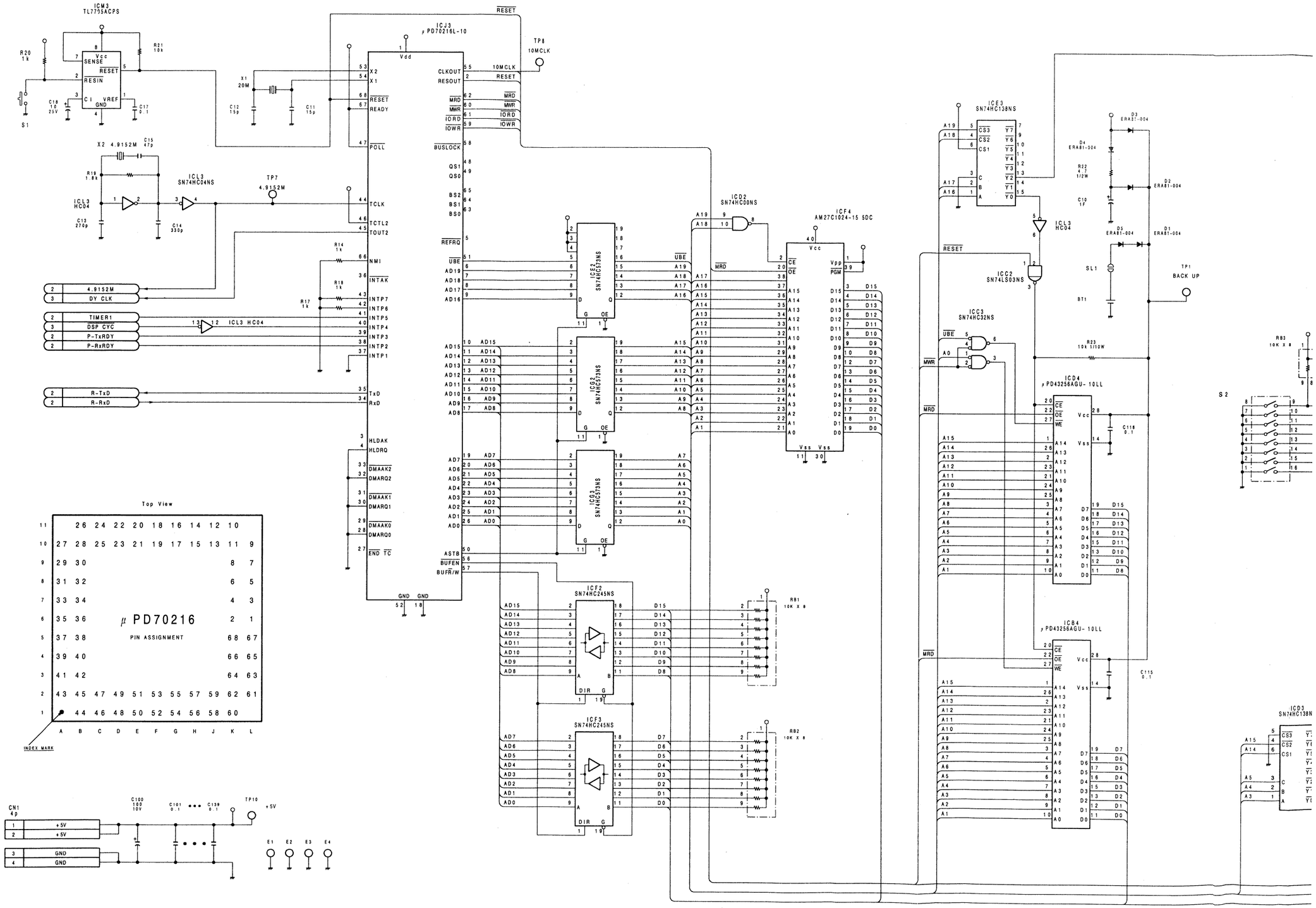




DP-123 BOARD

BOARD NO.1-637-302-11 & HIGHER
RM-D7300

KC-22 BOARD (1/4)
System Control



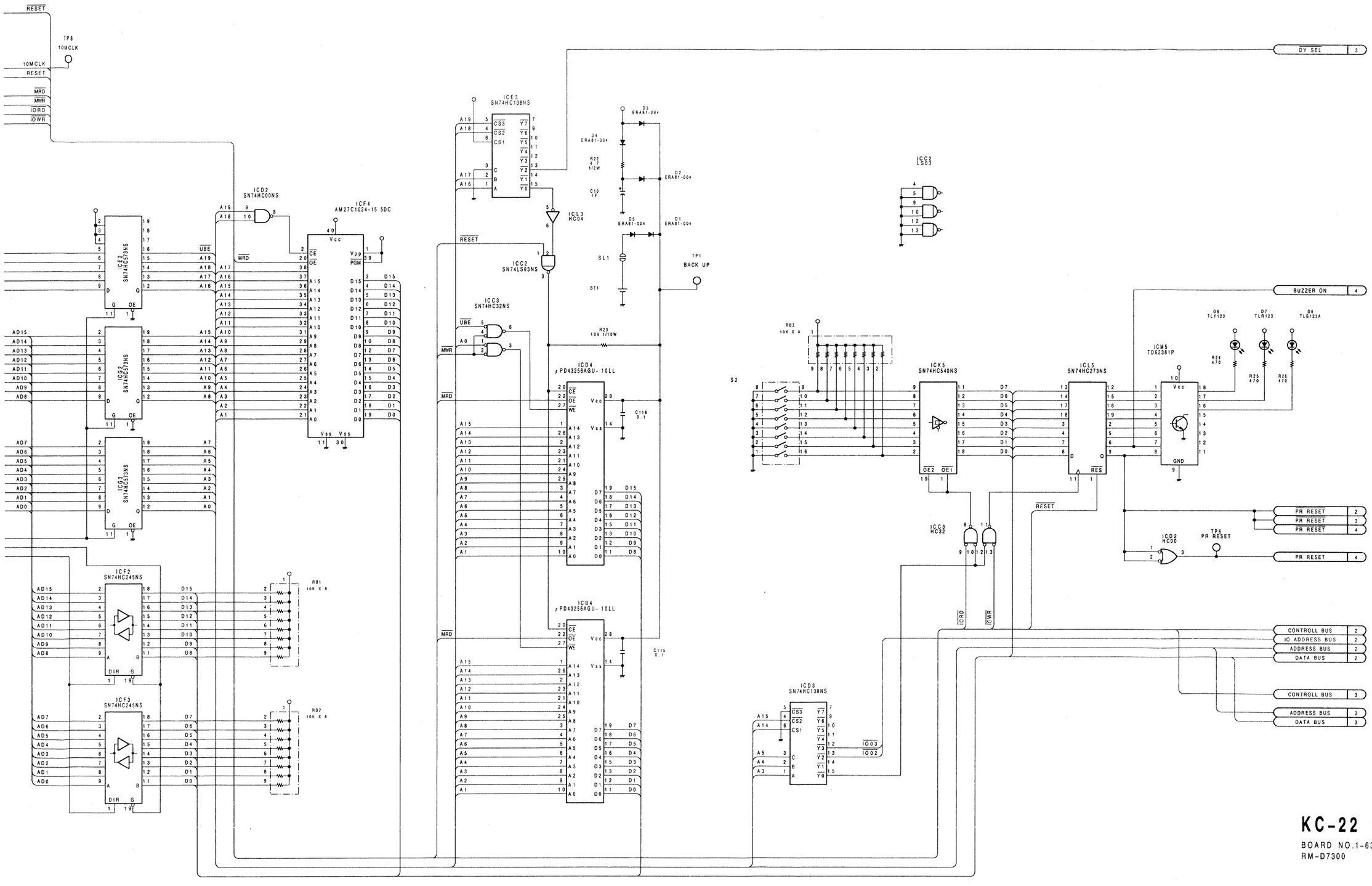
Top View

B-25

B-26

A | B | C | D | E | F | G | H

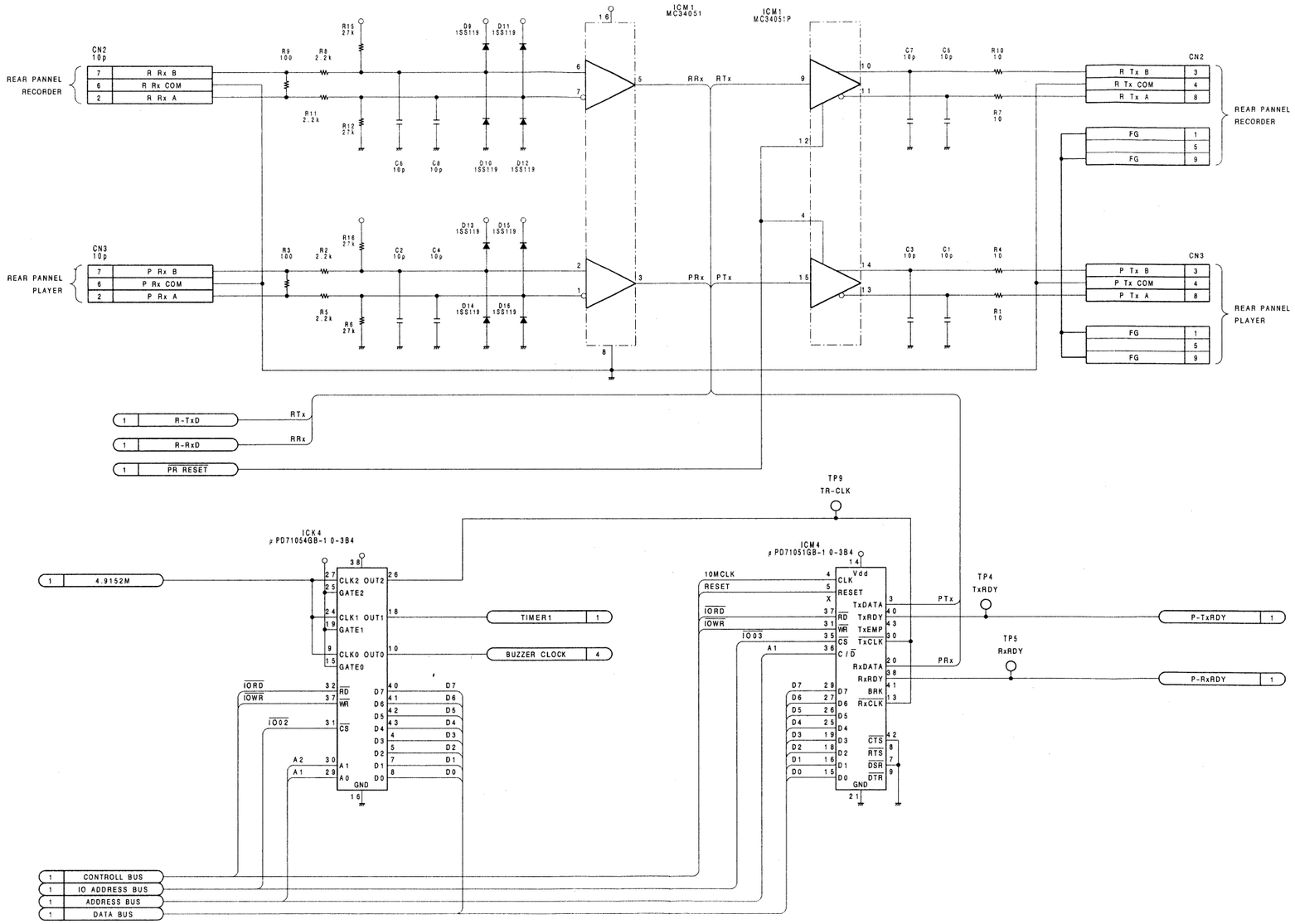
KC-22(1/4)



KC-22 BOARD (1/4)

BOARD NO.1-637-303-11 & HIGHER
RM-D7300

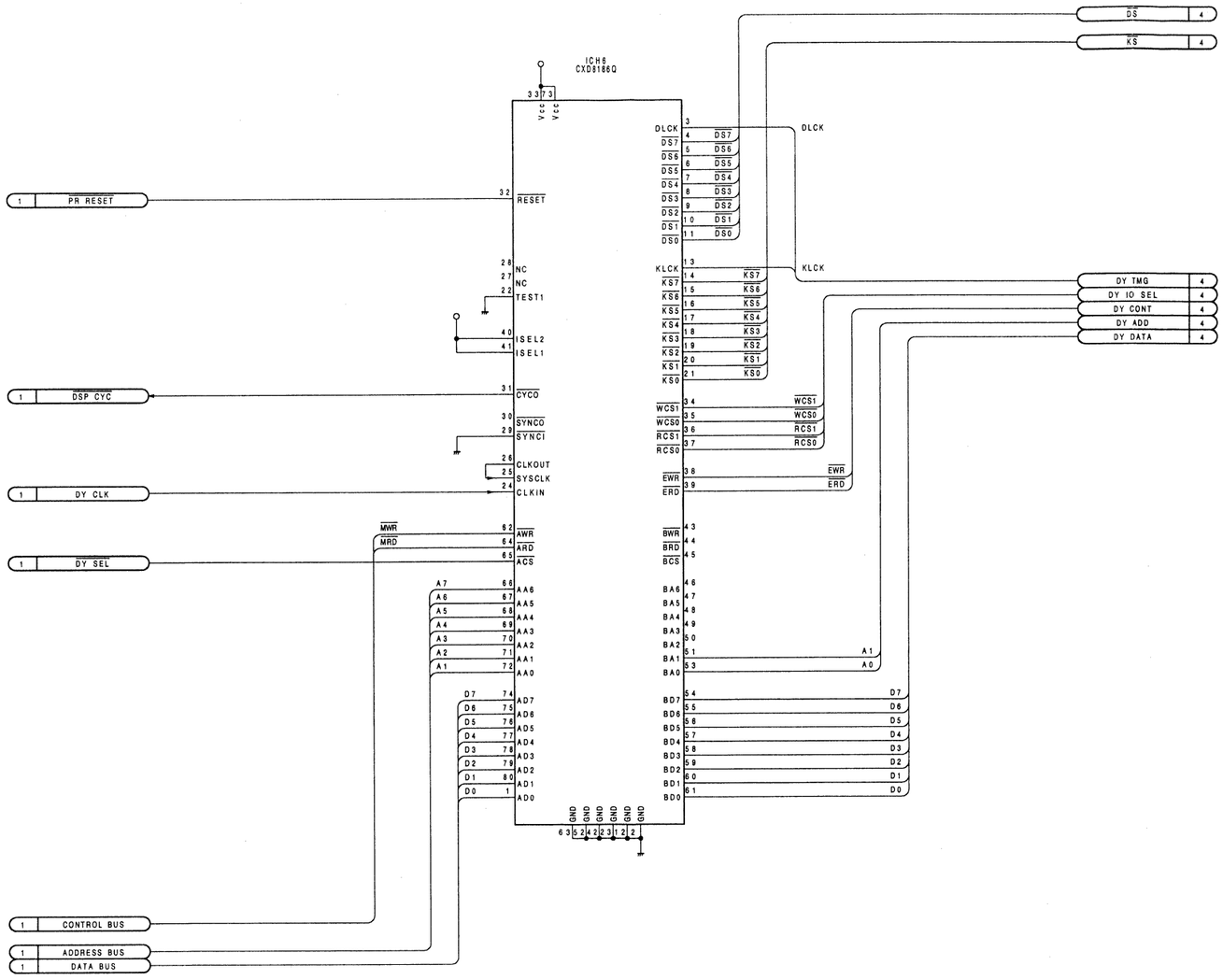
KC-22 BOARD (2/4)
System Control



KC-22 BOARD (2/4)

BOARD NO.1-637-303-11 HIGHER
RM-D7300

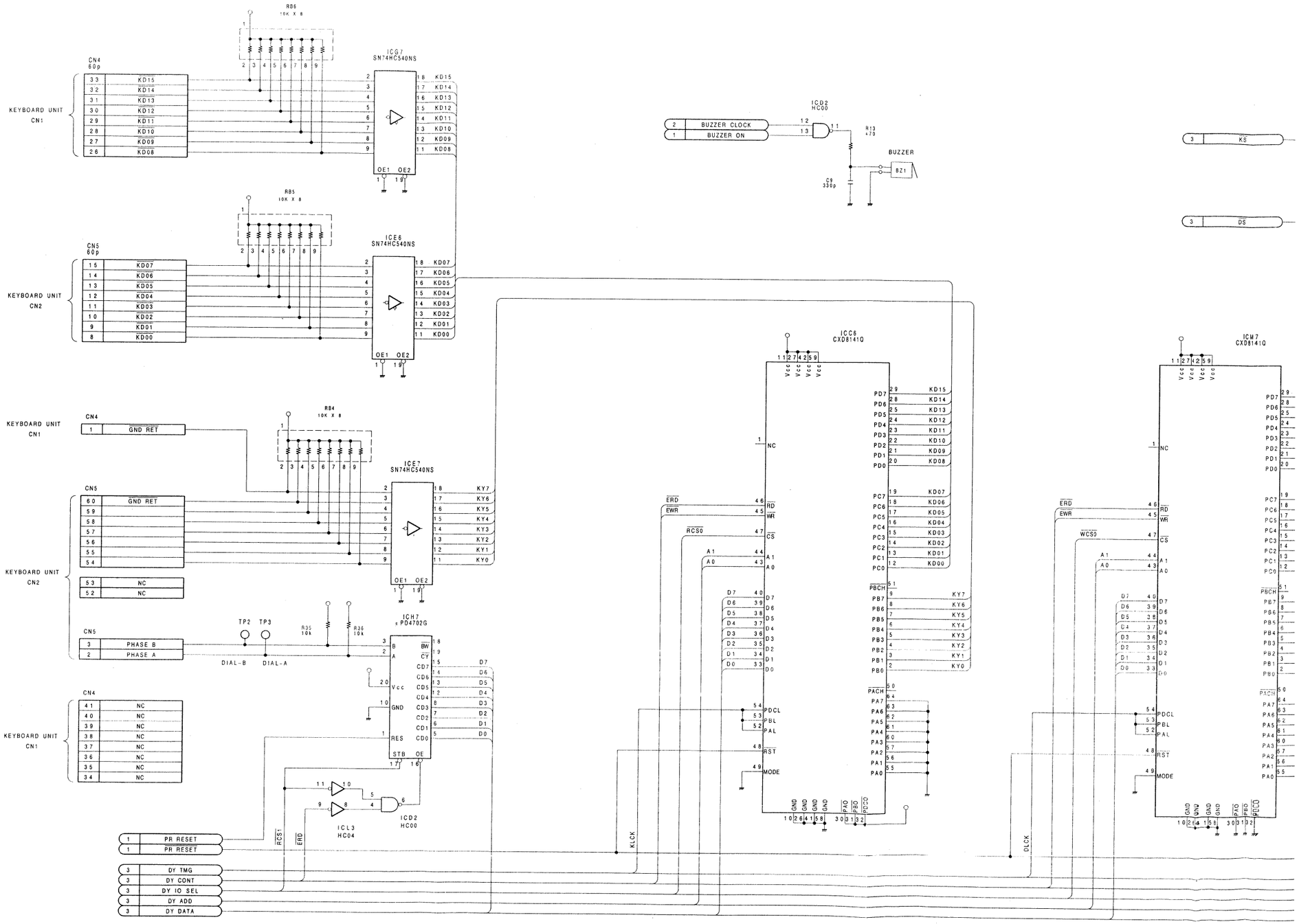
KC-22 BOARD (3/4)
System Control



KC-22 BOARD (3/4)

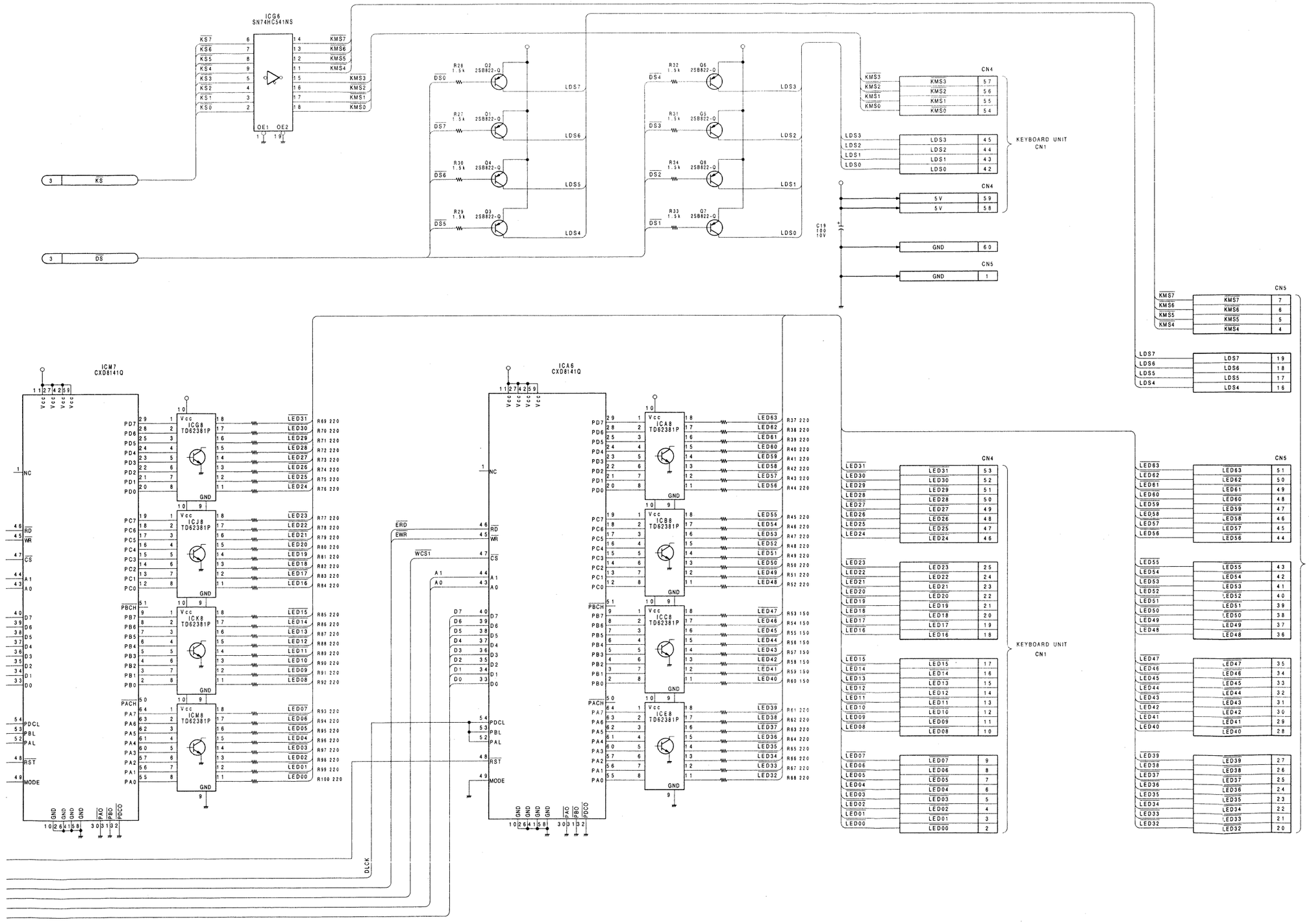
BOARD NO.1-637-303-11 & HIGHER
RM-D7300

KC-22 BOARD (4/4)
System Control



B-39 B-40

A | B | C | D | E | F | G | H

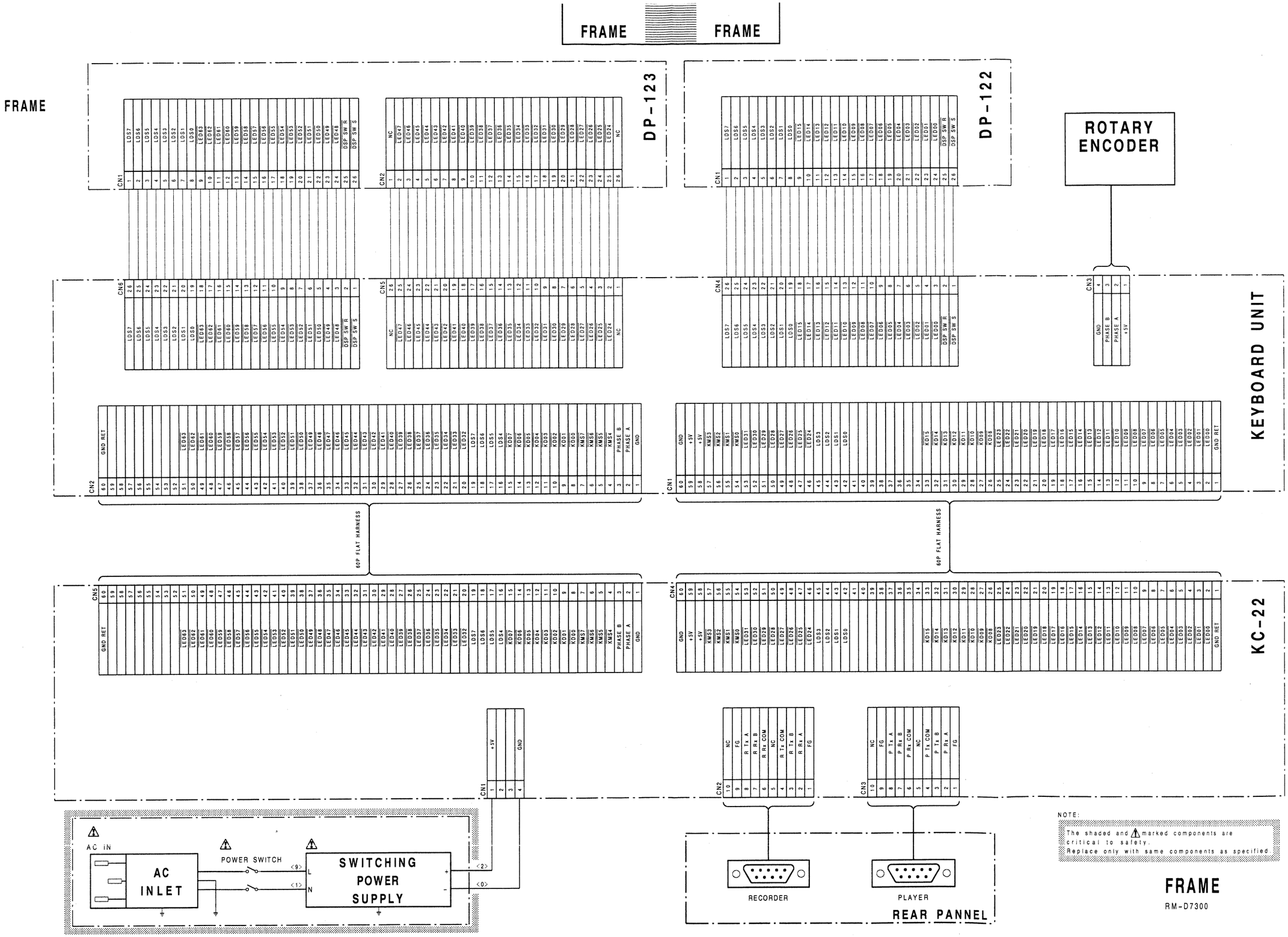


B-41

B-42

KC-22 BOARD (4/4)

BOARD NO.1-637-303-11 & HIGHER
RM-D7300


FRAME
FRAME
FRAME
DP-123
DP-122
ROTARY ENCODER
KEYBOARD UNIT
KC-22
60P FLAT HARNESS
60P FLAT HARNESS
CN1 LOS7 LOS6 LOS5 LOS4 LOS3 LOS2 LOS1 LOS0 LED63 LED62 LED61 LED60 LED59 LED58 LED57 LED56 LED55 LED54 LED53 LED52 LED51 LED50 LED49 LED48 DSP SW R DSP SW S
CN2 NC LED47 LED46 LED45 LED44 LED43 LED42 LED41 LED40 LED39 LED38 LED37 LED36 LED35 LED34 LED33 LED32 LED31 LED30 LED29 LED28 LED27 LED26 LED25 LED24 NC
CN3 GND PHASE B PHASE A +5V
CN4 LOS7 LOS6 LOS5 LOS4 LOS3 LOS2 LOS1 LOS0 LED15 LED14 LED13 LED12 LED11 LED10 LED09 LED08 LED07 LED06 LED05 LED04 LED03 LED02 LED01 LED00 DSP SW R DSP SW S
CN5 NC LED47 LED46 LED45 LED44 LED43 LED42 LED41 LED40 LED39 LED38 LED37 LED36 LED35 LED34 LED33 LED32 LED31 LED30 LED29 LED28 LED27 LED26 LED25 LED24 NC
CN6 LOS7 LOS6 LOS5 LOS4 LOS3 LOS2 LOS1 LOS0 LED63 LED62 LED61 LED60 LED59 LED58 LED57 LED56 LED55 LED54 LED53 LED52 LED51 LED50 LED49 LED48 DSP SW R DSP SW S
CN1 GND +5V +5V KMS3 KMS2 KMS1 KMS0 LED31 LED30 LED29 LED28 LED27 LED26 LED25 LED24 LOS3 LOS2 LOS1 LOS0 KOI5 KOI4 KOI3 KOI2 KOI1 KOI0 KOD9 KOD8 LED23 LED22 LED21 LED20 LED19 LED18 LED17 LED16 LED15 LED14 LED13 LED12 LED11 LED10 LED09 LED08 LED07 LED06 LED05 LED04 LED03 LED02 LED01 LED00 GND RET
CN2 GND RET KMS3 KMS2 KMS1 KMS0 LED31 LED30 LED29 LED28 LED27 LED26 LED25 LED24 LED23 LED22 LED21 LED20 LED19 LED18 LED17 LED16 LED15 LED14 LED13 LED12 LED11 LED10 LED09 LED08 LED07 LED06 LED05 LED04 LED03 LED02 LED01 LED00 LOS7 LOS6 LOS5 LOS4 LOS3 LOS2 LOS1 LOS0 KOD7 KOD6 KOD5 KOD4 KOD3 KOD2 KOD1 KOD0 KMS7 KMS6 KMS5 KMS4 PHASE B PHASE A GND
CN3 +5V GND
CN2 NC FG R Tx A R Rx B R Rx COM NC R Tx COM R Tx B R Rx A FG
CN3 NC FG P Tx A P Rx B P Rx COM NC P Tx COM P Tx B P Rx A FG
AC IN
AC INLET
POWER SWITCH
SWITCHING POWER SUPPLY
RECORDER
PLAYER
REAR PANNEL

NOTE:
The shaded and ⚠ marked components are critical to safety.
Replace only with same components as specified.

FRAME
RM-D7300

SECTION C
SEMICONDUCTOR PIN ASSIGNMENTS

ここに記載されているIC, トランジスタ, ダイオードは, それぞれの機能を等価的に表したものです。したがって互換性を表すものではありません。(互換性のない型名が併記されている事もあります。) 部品の交換をする時は, SPARE PARTSの章を参照して下さい。

ICs, transistors and diodes of which functions are equivalent indicated are described here. Therefore, incompatible device names may be described together. For parts replacement, refer to the Spare Parts section in this manual.

IC	PAGE
AM27C2048-150DC	C-2
AM27C2048-155DC	C-2
CXD8141Q	C-2
CXD8186Q	C-3
MC34051P	C-4
SN74HC00ANS	C-4
SN74HC04ANS	C-4
SN74HC138ANS	C-4
SN74HC245ANS	C-5
SN74HC273ANS	C-5
SN74HC32ANS	C-5
SN74HC540ANS	C-5
SN74HC541ANS	C-5
SN74HC573BNS	C-5
SN74LS03NS	C-6
TD62381P	C-6
TL7705ACPS	C-6
UPD43256AGU-10LL	C-6
UPD4702G	C-7
UPD70216L-10	C-7
UPD71051GB-10-3B4	C-8
UPD71054GB-10-3B4	C-8

TRANSISTOR	PAGE
2SB822	C-9

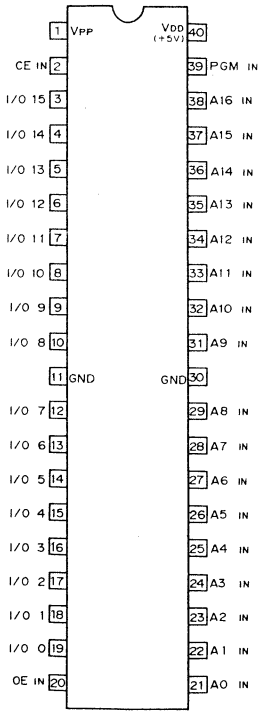
DIODE	PAGE
1SS119	C-9
ERA81-004	C-9
GL-3HY8	C-9
HDSP-4840	C-9
HDSP-4850	C-9
HDSP-7501	C-9
TLG123A	C-9
TLR123	C-9
TLY123	C-9

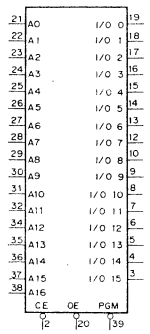
等価回路はICメーカーのData Bookに従いました。

The circuit diagram of each IC is obtained from the IC data book published by the manufacturer.

IC

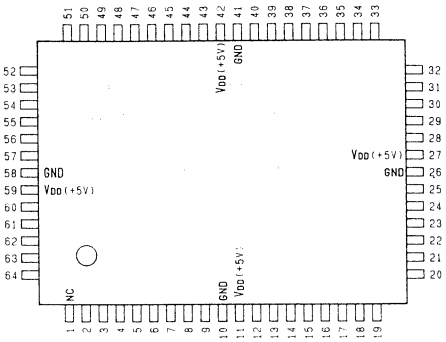
AM27C2048-150DC (AMD)
AM27C2048-155DC (AMD)
C-MOS 2M (131072×16)-BIT UV EPROM
– TOP VIEW –





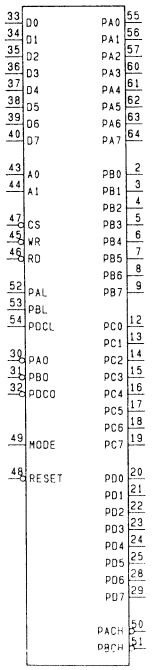
A0 – A16	;	ADDRESS INPUTS
CE	;	CHIP ENABLE INPUT
I/O0 – I/O15	;	DATA INPUT/OUTPUT
OE	;	OUTPUT ENABLE INPUT
PGM	;	PROGRAM ENABLE INPUT
VPP	;	PROGRAM VOLTAGE INPUT NORMAL : +5V,PROGRAM : +12.5V

CXD8141Q (SONY)
C-MOS PARALLEL I/O PORT (8BIT×4PORT)
– TOP VIEW –



(VDD = + 5V)

PIN No.	I/O	SIGNAL	PIN No.	I/O	SIGNAL	PIN No.	I/O	SIGNAL	PIN No.	I/O	SIGNAL
1	–	NC	17	I/O	PC5	33	I/O	D0	49	I/O	MODE
2	I/O	PB0	18	I/O	PC6	34	I/O	D1	50	O	$\overline{PACH}$
3	I/O	PB1	19	I/O	PC7	35	I/O	D2	51	O	$\overline{PBCH}$
4	I/O	PB2	20	I/O	PD0	36	I/O	D3	52	I	PAL
5	I/O	PB3	21	I/O	PD1	37	I/O	D4	53	I	PBL
6	I/O	PB4	22	I/O	PD2	38	I/O	D5	54	I	PDCL
7	I/O	PB5	23	I/O	PD3	39	I/O	D6	55	I/O	PA0
8	I/O	PB6	24	I/O	PD4	40	I/O	D7	56	I/O	PA1
9	I/O	PB7	25	I/O	PD5	41	–	GND	57	I/O	PA2
10	–	GND	26	–	GND	42	–	VDD	58	–	GND
11	–	VDD	27	–	VDD	43	I	A0	59	–	VDD
12	I/O	PC0	28	I/O	PD6	44	I	A1	60	I/O	PA3
13	I/O	PC1	29	I/O	PD7	45	I	$\overline{WR}$	61	I/O	PA4
14	I/O	PC2	30	I	$\overline{PAO}$	46	I	$\overline{RD}$	62	I/O	PA5
15	I/O	PC3	31	I	$\overline{PBO}$	47	I	$\overline{CS}$	63	I/O	PA6
16	I/O	PC4	32	I	$\overline{PDCO}$	48	I	$\overline{RST}$	64	I/O	PA7



INPUT

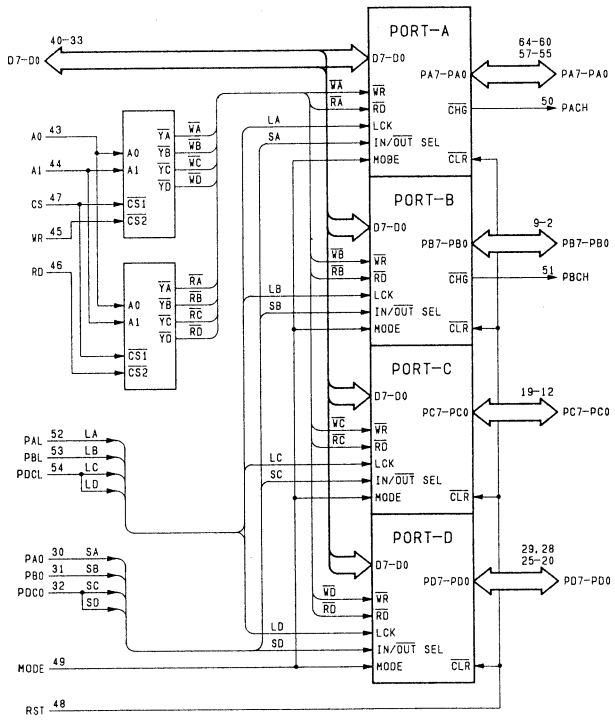
A1, A0	; CPU ADDRESS BUS
CS	; CHIP SELECT
D7 – D0	; CPU DATA BUS
MODE	; LATCH SETTING SELECT IN THE PORT.
PAL	; LATCH SIGNAL INPUT FOR PORT-A
PAO	; L : PORT-A IS USED AS OUTPUT PORT. H : PORT-A IS USED AS INPUT PORT.
PBL	; LATCH SIGNAL INPUT FOR PORT-B
PBO	; L : PORT-B IS USED AS OUTPUT PORT. H : PORT-B IS USED AS INPUT PORT.
PDCL	; LATCH SIGNAL FOR PORT-C/D
PDCO	; L : PORT-C/D IS USED AS OUTPUT PORT. H : PORT-C/D IS USED AS INPUT PORT.
RD	; WHEN SET TO "L"IN CASE OF CS "L", PORT DATA SELECTED AT A1 AND A0 IS OUTPUT TO D7 – D0.
RST	; RESET
WR	; WHEN SET FROM "L"TO "H"IN CASE OF CS "L", D7 – D0 DATA IS OUTPUT TO THE PORT SELECTED AT A1 AND A0.

OUTPUT

PACH	; OUTPUT "L" WHEN PORT-A DATA VARLED BECOMING "HI-Z" WHEN PORT-A DATA NOT VARIED
PBCH	; OUTPUT "L" WHEN PORT-B DATA VARIED BECOMING "HI-Z" WHEN PORT-B DATA NOT VARIED

INPUT/OUTPUT

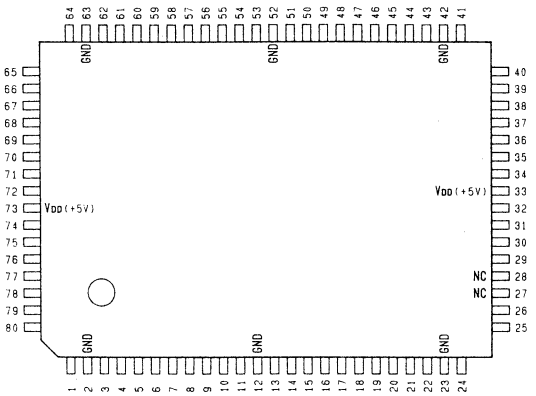
PA7 – PA0	; PORT-A INPUT/OUTPUT OUTPUT ($\overline{PAO}$: "L"), INPUT ($\overline{PAO}$: "H").
PB7 – BB0	; PORT-B INPUT/OUTPUT OUTPUT ($\overline{PBO}$: "L"), INPUT ($\overline{PBO}$: "H")
PC7 – PC0	; PORT-C INPUT/OUTPUT OUTPUT ($\overline{PDCO}$: "L"), INPUT ($\overline{PDCO}$: "H")
PD7 – PD0	; PORT-D INPUT/OUTPUT OUTPUT ($\overline{PDCO}$; "L"), INPUT ($\overline{PDCO}$: "H")



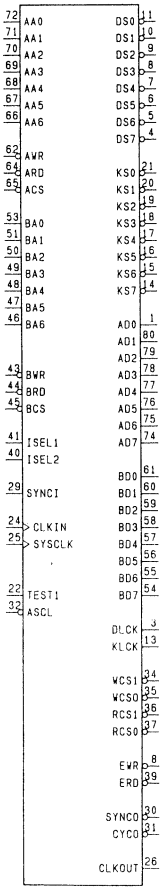
CXD8186Q (SONY)

C-MOS KEY/LED CONTROL

– TOP VIEW –



PIN No.	I/O	SIGNAL	PIN No.	I/O	SIGNAL	PIN No.	I/O	SIGNAL	PIN No.	I/O	SIGNAL
1	I/O	AD0	21	O	$\overline{KS0}$	41	I	ISEL1	61	O	BD0
2	–	GND	22	I	TEST1	42	–	GND	62	I	$\overline{AWR}$
3	O	DLCK	23	–	GND	43	I/O	$\overline{BWR}$	63	–	GND
4	O	$\overline{DS7}$	24	I	CLKIN	44	I/O	$\overline{BRD}$	64	I	$\overline{ARD}$
5	O	$\overline{DS6}$	25	I	SYSCLK	45	I/O	$\overline{BCS}$	65	I	$\overline{ACS}$
6	O	$\overline{DS5}$	26	O	CLKOUT	46	I/O	BA6	66	I	AA6
7	O	$\overline{DS4}$	27	–	NC	47	I/O	BA5	67	I	AA5
8	O	$\overline{DS3}$	28	–	NC	48	I/O	BA4	68	I	AA4
9	O	$\overline{DS2}$	29	I	$\overline{SYNCI}$	49	I/O	BA3	69	I	AA3
10	O	$\overline{DS1}$	30	O	$\overline{SYNCO}$	50	I/O	BA2	70	I	AA2
11	O	$\overline{DS0}$	31	O	$\overline{CYCO}$	51	I/O	BA1	71	I	AA1
12	–	GND	32	I	$\overline{ASCL}$	52	–	GND	72	I	AA0
13	O	KLCK	33	–	VDD	53	I/O	BA0	73	–	VDD
14	O	$\overline{KS7}$	34	O	$\overline{WCS1}$	54	I/O	BD7	74	I/O	AD7
15	O	$\overline{KS6}$	35	O	$\overline{WCS0}$	55	I/O	BD6	75	I/O	AD6
16	O	$\overline{KS5}$	36	O	$\overline{RCS1}$	56	I/O	BD5	76	I/O	AD5
17	O	$\overline{KS4}$	37	O	$\overline{RCS0}$	57	I/O	BD4	77	I/O	AD4
18	O	$\overline{KS3}$	38	O	$\overline{EWR}$	58	I/O	BD3	78	I/O	AD3
19	O	$\overline{KS2}$	39	O	$\overline{ERD}$	59	I/O	BD2	79	I/O	AD2
20	O	$\overline{KS1}$	40	I	ISEL2	60	I/O	BD1	80	I/O	AD1



INPUT

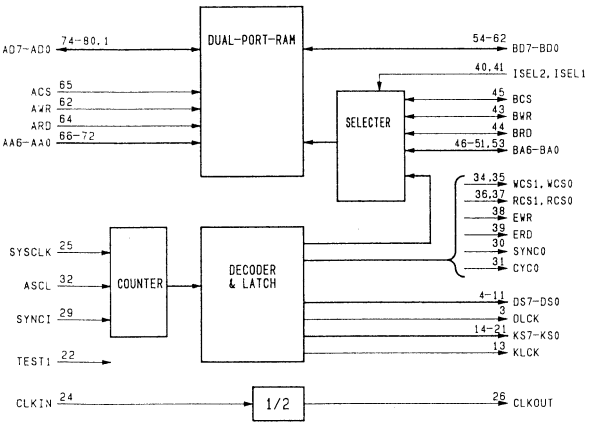
AA0 – 6	; DUAL-PORT-RAM A SIDE ADDRESS
ACS	; CHIP SELECT
ARD	; DUAL-PORT-RAM A SIDE READ ENABLE
ASCL	; RESET (Normally SET TO "H")
AWR	; DUAL-PORT-RAM A SIDE WRITE ENABLE
CLKIN	; CLOCK INPUT
ISEL1	; L : BA0 – 6 AND BCS ARE USED AS DUAL-PORT-RAM B SIDE ADDRESS AND CHIP SELECT INPUTS. H : BA0 – 6 AND BCS ARE USED AS INTERNAL GENERATED RAM ACCESS TIMING SIGNAL OUTPUTS.
ISEL2	; L : BWRANDBRD ARE USED AS DUAL-PORT-RAM B SIDE WRITE ENABLE AND READ ENABLE INPUTS. H : BWR AND BRD ARE USED AS INTERNAL GENERATED RAM ACCESS TIMING SIGNAL OUTPUTS.
SYNCI	; SYNCHRONIZATION SIGNAL WHEN PLURAL CXD8186Q ARE USED.
SYSCLK	; OPERATION CLOCK
TEST1	; TEST (Normally "L"OR OPEN)

OUTPUT

CLKOUT	; 1/2 CLOCK OUTPUT (DUTY RATIO 50)
CYCO	; INDICATES DYNAMIC LIGHTING/DYNAMIC KEY SCAN ONE CYCLE COMPLETION.
DLCK	; DATA LATCH CLOCK
DS0 – 7	; LED SELECT LINE
E-RD	; INTERNAL GENERATED READ ENABLE
E-WR	; INTERNAL GENERATED WRITE ENABLE
KLCK	; DATA SAMPLE CLOCK
KS0 – 7	; KEY SELECT LINE
RCS0, 1	; INTERNAL GENERATED CHIP SELECT FOR KEY INPUT
SYNCO	; SYNCHRONIZATION SIGNAL WHEN PLURAL CXD8186Q ARE USED.
WCS0, 1	; INTERNAL GENERATED CHIP SELECT FOR LED DISPLAY

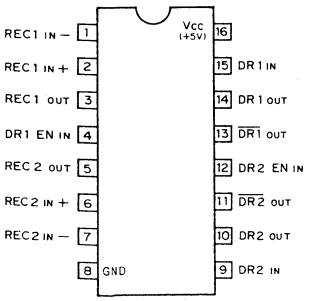
INPUT/OUTPUT

AD0 – 7	; DUAL-PORT-RAM A SIDE DATA
BA0 – 6, BCS	; DUAL-PORT-RAM B SIDE ADDRESS AND CHIP SELECT INPUT (WHEN ISEL1 IS "L") INTERNAL GENERATED RAM ACCESS TIMING SIGNAL OUTPUT (WHEN ISEL1 IS "H")
BD0 – 7	; DUAL-PORT-RAM B SIDE DATA
BWR, BRD	; DUAL-PORT-RAM B SIDE WRITE ENABLE AND READ ENABLE INPUT (WHEN ISEL2 IS "L") INTERNAL GENERATED RAM ACCESS TIMING SIGNAL OUTPUT (WHEN ISEL2 IS "H")



MC34051P (MOTOROLA)

RS-422 DRIVER/RECEIVER
– TOP VIEW –

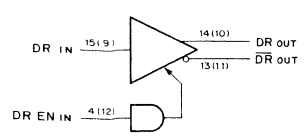


DR EN	MODE
0	DISABLE
1	ENABLE

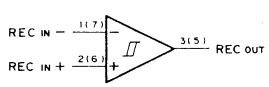
0 ; LOW LEVEL
1 ; HIGH LEVEL

DR ; DRIVER
DR EN ; DRIVER ENABLE
REC ; RECEIVER

DRIVER CIRCUIT

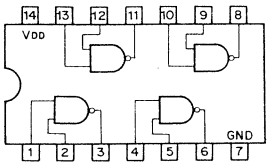


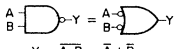
RECEIVER CIRCUIT



SN74HC00ANS (TI) FLAT PACKAGE

C-MOS QUAD 2-INPUT NAND GATES
– TOP VIEW –





A	B	Y
0	0	1
0	1	1
1	0	1
1	1	0

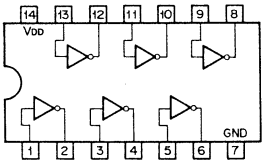
0 ; LOW LEVEL
1 ; HIGH LEVEL

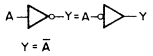
NOTE :

TYPE	VDD
TC74AC00P TC74AC00F	+2 to +5.5V
MC74HCT00N 74ACT00PC	+5V
OTHER TYPES	+2 to +6V

SN74HC04ANS (TI) FLAT PACKAGE

C-MOS HEX INVERTERS
– TOP VIEW –





A	Y
0	1
1	0

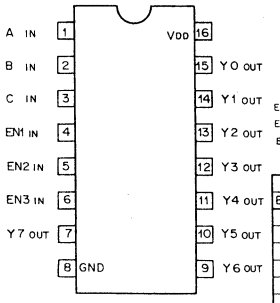
0 ; LOW LEVEL
1 ; HIGH LEVEL

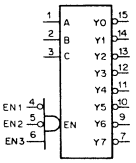
NOTE :

TYPE	VDD
74ACT04 TYPES 74HCT04 TYPES	+5V
TC74AC04F	+2 to +5.5V
TC74ACT04F	+4.5 to +5.5V
OTHER TYPES	+2 to +6V

SN74HC138ANS (TI) FLAT PACKAGE

C-MOS 3-TO-8 LINE DECODER/DEMULTIPLEXER
– TOP VIEW –





INPUTS				OUTPUTS							
EN	C	B	A	Y7	Y6	Y5	Y4	Y3	Y2	Y1	Y0
0	X	X	X	1	1	1	1	1	1	1	1
1	0	0	0	1	1	1	1	1	1	1	0
1	0	0	1	1	1	1	1	1	1	0	1
1	0	1	0	1	1	1	1	1	0	1	1
1	0	1	1	1	1	1	1	0	1	1	1
1	1	0	0	1	1	1	0	1	1	1	1
1	1	0	1	1	1	0	1	1	1	1	1
1	1	1	0	1	0	1	1	1	1	1	1
1	1	1	1	0	1	1	1	1	1	1	1

EN = $\overline{EN1} \cdot \overline{EN2} \cdot EN3$

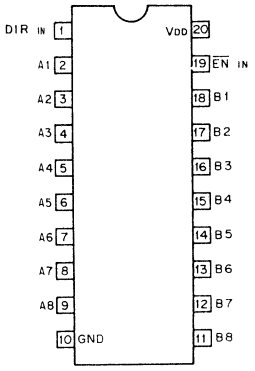
0 ; LOW LEVEL
1 ; HIGH LEVEL
X ; DON'T CARE

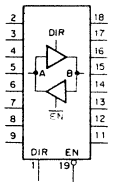
NOTE :

TYPE	VDD
74AC/74HC	+2 to +6V
74ACT/74HCT	+5V
TC74AC138	+2 to +5.5V

SN74HC245ANS (TI) FLAT PACKAGE

C-MOS BILATERAL BUS TRANSCEIVERS WITH 3-STATE OUTPUTS
– TOP VIEW –



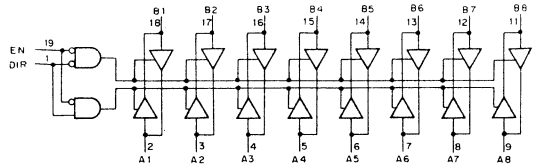


EN	DIR	OPERATION
0	0	B to A
0	1	A to B
1	X	HI-Z

0 ; LOW LEVEL
1 ; HIGH LEVEL
X ; DON'T CARE
HI-Z ; HIGH IMPEDANCE

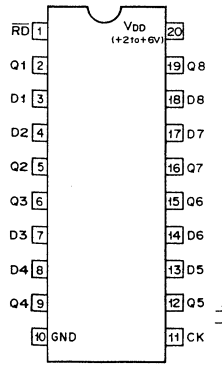
NOTE :

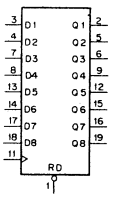
TYPE	VDD
AC HC	+2 to +6V
ACT HCT	+5V
TC74AC245F TC74AC245P	+2 to +5.5V



SN74HC273ANS (TI) FLAT PACKAGE

C-MOS OCTAL D-TYPE FLIP-FLOPS WITH RESET
– TOP VIEW –

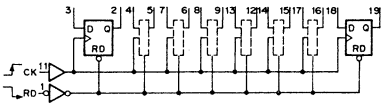




EACH FLIP-FLOP

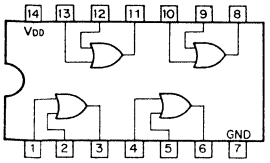
INPUT			OUT
RD	CK	D	Q
0	X	X	0
1	↓	0	0
1	↓	1	1
1	0	X	Q0

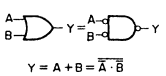
0 ; LOW LEVEL
1 ; HIGH LEVEL
X ; DON'T CARE



SN74HC32ANS (TI) FLAT PACKAGE

C-MOS 2-INPUT OR GATES
– TOP VIEW –





$Y = A + B = \overline{\overline{A} \cdot \overline{B}}$

A	B	Y
0	0	0
0	1	1
1	0	1
1	1	1

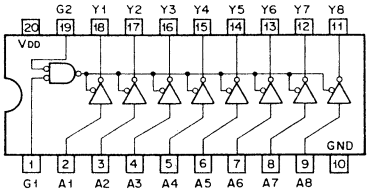
0 ; LOW LEVEL
1 ; HIGH LEVEL

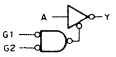
NOTE :

TYPE	VDD
TC74AC32	+2 to +5.5V
OTHER TYPES	+2 to +6V

SN74HC540ANS (TI) FLAT PACKAGE

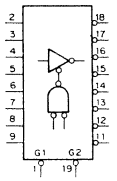
C-MOS 3-STATE INVERTING BUFFER/LINE DRIVER/LINE RECEIVER
– TOP VIEW –





G1	G2	A	Y
0	0	0	1
0	0	1	0
1	X	X	HI-Z
X	1	X	HI-Z

0 ; LOW LEVEL
1 ; HIGH LEVEL
X ; DON'T CARE
HI-Z ; HIGH IMPEDANCE

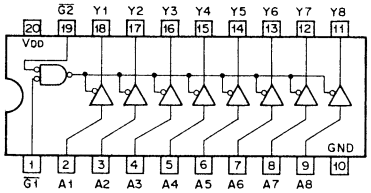


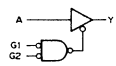
NOTE :

TYPE	VDD
TC74AC540F TC74AC540P	+5V
OTHER TYPES	+2 to +6V

SN74HC541ANS (TI) FLAT PACKAGE

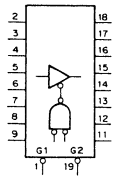
C-MOS BUFFERS AND LINE DRIVERS WITH 3-STATE OUTPUTS
– TOP VIEW –





G1	G2	A	Y
0	0	0	0
0	0	1	1
1	X	X	HI-Z
X	1	X	HI-Z

0 ; LOW LEVEL
1 ; HIGH LEVEL
X ; DON'T CARE
HI-Z ; HIGH IMPEDANCE

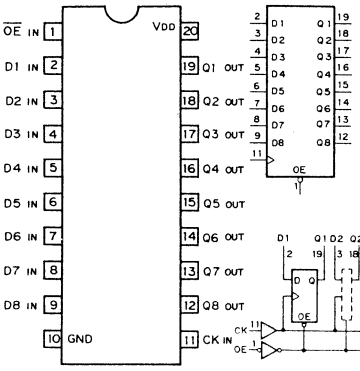


NOTE :

TYPE	VDD
AC	+2 to +5.5V
HC	+2 to +6V
ACT/HCT	+5V

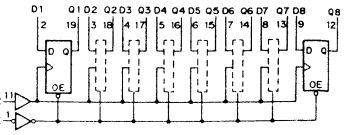
SN74HC573BNS (TI) FLAT PACKAGE

C-MOS 3-STATE OUTPUTS OCTAL LATCHES
– TOP VIEW –



INPUTS			OUT
OE	CK	D	Q
0	1	1	1
0	1	0	0
0	0	X	Q0
1	X	X	HI-Z

0 ; LOW LEVEL
1 ; HIGH LEVEL
X ; DON'T CARE
HI-Z ; HIGH IMPEDANCE
Q0 ; NO CHANGE

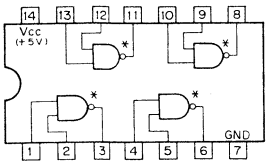


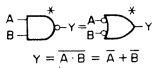
NOTE :

TYPE	VDD
AC HC	+2 to +6V
ACT HCT	+5V
TC74AC573	+2 to +5.5V

SN74LS03NS (TI) FLAT PACKAGE

TTL 2-INPUT POSITIVE-NAND GATE WITH OPEN-COLLECTOR
- TOP VIEW -



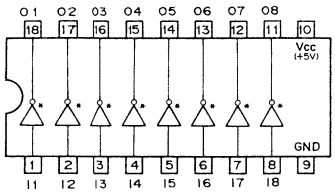


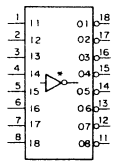
A	B	Y
0	0	1
0	1	1
1	0	1
1	1	0

0;LOW LEVEL
1;HIGH LEVEL

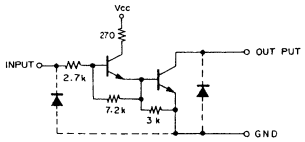
TD62381P (TOSHIBA)

OCTAL LOW SATURATION DRIVER
- TOP VIEW -



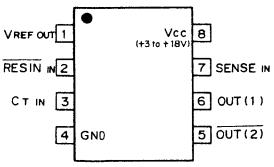


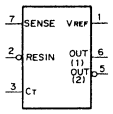
*; OPEN COLLECTOR

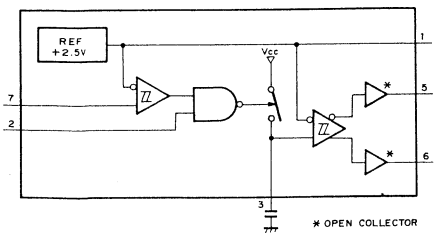


TL7705ACPS (TI) FLAT PACKAGE

POWER VOLTAGE SUPERVISOR
- TOP VIEW -



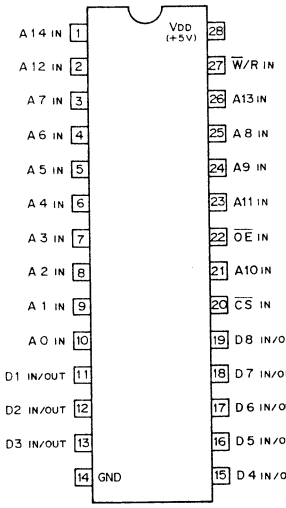


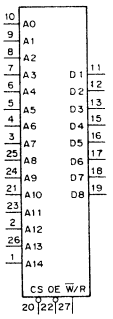


* OPEN COLLECTOR

UPD43256AGU-10LL (NEC)

C-MOS 262144-BIT (32768x8) STATIC RAM
- TOP VIEW -

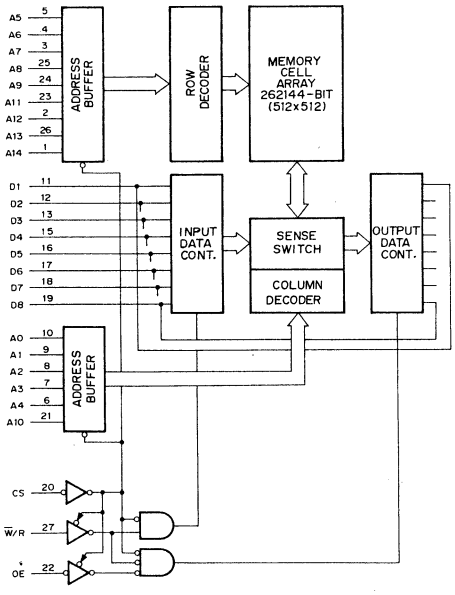




A0–A14 ; ADDRESS INPUTS
D1–D8 ; DATA INPUTS/OUTPUTS
CS ; CHIP SELECT INPUT
OE ; OUTPUT ENABLE INPUT
W/R ; WRITE/READ INPUT

INPUTS			MODE	OUTPUT STATUS
CS	OE	W/R		
1	X	X	NO SELECTION	HI-Z
0	1	1	OUTPUT DISABLE	
0	0	1	READ	D OUT
0	X	0	WRITE	D IN

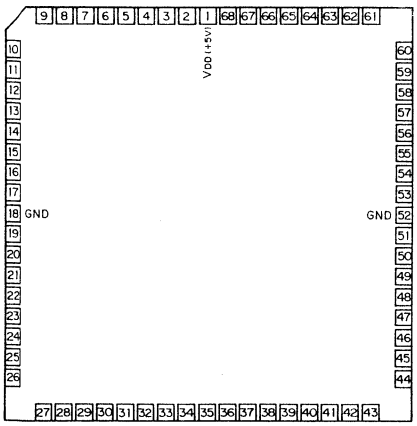
0 ; LOW LEVEL X ; DON'T CARE
1 ; HIGH LEVEL HI-Z ; HIGH IMPEDANCE

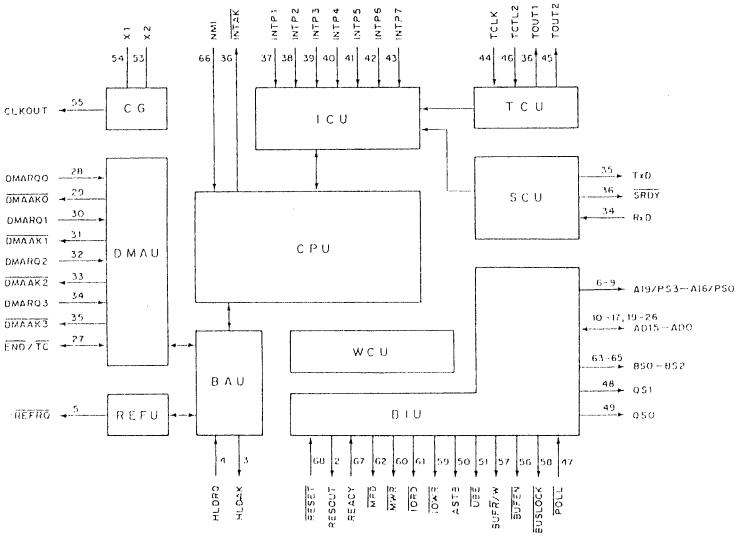


UPD70216L-10 (NEC) (CLOCK FREQUENCY ; 10MHz)

C-MOS 16 BIT MICROPROCESSOR

– TOP VIEW –



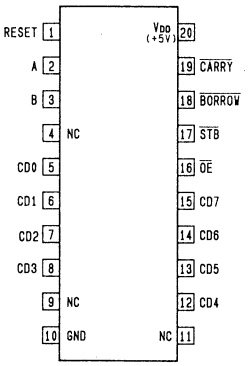


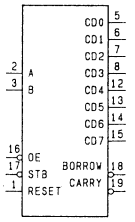
PIN NO.	FUNCTION	PIN NO.	FUNCTION	PIN NO.	FUNCTION	PIN NO.	FUNCTION
1	VDD(+5V)	18	GND	35	DMAAK3/TxD	52	GND
2	RES OUT	19	AD7	36	INTAK/SRDY/T OUT1	53	X2
3	HLDAK	20	AD6	37	INTP1	54	X1
4	HLDRQ	21	AD5	38	INTP2	55	CLK OUT
5	REFRQ	22	AD4	39	INTP3	56	BUFEN
6	A19/PS3	23	AD3	40	INTP4	57	BUFR/W
7	A18/PS2	24	AD2	41	INTP5	58	BUSLOCK
8	A17/PS1	25	AD1	42	INTP6	59	IOWR
9	A16/PS0	26	AD0	43	INTP7	60	MWR
10	AD15	27	END/TC	44	TCLK	61	IORD
11	AD14	28	DMARQ0	45	Tout2	62	MRD
12	AD13	29	DMAAK0	46	TCTL2	63	BS0
13	AD12	30	DMARQ1	47	POLL	64	BS1
14	AD11	31	DMAAK1	48	QS1	65	BS2
15	AD10	32	DMARQ2	49	QS0	66	NMI
16	AD9	33	DMAAK2	50	ASTB	67	READY
17	AD8	34	DMARQ3/RxD	51	UBE	68	RESET

UPD4702G (NEC)

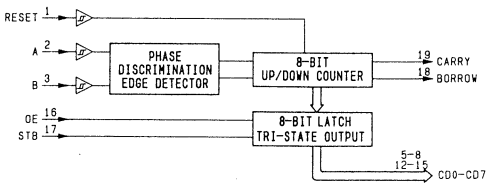
C-MOS INCREMENTAL ENCODER 8BIT UP DOWN COUNTER

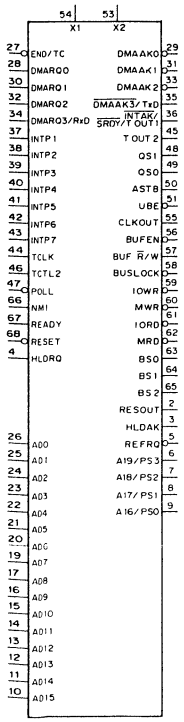
– TOP VIEW –





A	;INCREMENTAL SIGNAL (PHASE A) INPUT
B	;INCREMENTAL SIGNAL (PHASE B) INPUT
BORROW	;BORROW PULSE OUTPUT
CARRY	;CARRY PULSE OUTPUT
CD0–7	;COUNT DATA OUTPUT
OE	;OUTPUT CONTROL SIGNAL INPUT
RESET	;COUNTER RESET INPUT
STB	;LATCH STROBE SIGNAL INPUT



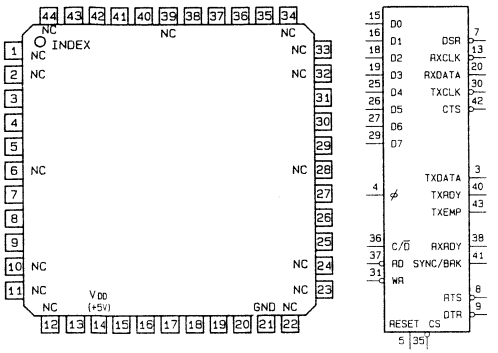


A16/PS0–A19/PS3	(O)	; ADDRESS/PROCESSOR STATUS
AD0–AD15	(I/O)	; ADDRESS BUS/DATA BUS
ASTB	(O)	; ADDRESS STROBE
BS0–BS2	(O)	; BUS STATUS
BUFEN	(O)	; BUFFER ENABLE
BUF R/W	(O)	; BUFFER READ/WRITE
BUSLOCK	(O)	; BUS LOCK
CLKOUT	(O)	; CLOCK OUTPUT
DMAAK0–2	(O)	; DMA ACKNOWLEDGE 0 – 2
DMAAK3/TxD	(O)	; DMA ACKNOWLEDGE3/TRANSMIT DATA
DMARQ0–2	(I)	; DMA REQUEST 0–2
DMARQ3/RxD	(I)	; DMA REQUEST/RECEIVE DATA
END/TC	(I/O)	; END/TERMINAL COUNT
HLDAK	(O)	; BUS HOLD ACKNOWLEDGE
HLDRQ	(I)	; BUS HOLD REQUEST
INTAK/SRDY/TOUT1	(O)	; INTERRUPT ACKNOWLEDGE/SERIAL READY/TIMER OUT 1
INTP0–INTP7	(I)	; INTERRUPT REQUEST FROM PERIPHERAL 0 – 7
IORD	(O)	; I/O READ STROBE
IOWR	(O)	; I/O WRITE STROBE
MRD	(O)	; MEMORY READ STROBE
MWR	(O)	; MEMORY WRITE STROBE
NMI	(I)	; NON MASKABLE INTERRUPT
POLL	(I)	; POLL
QS0, QS1	(O)	; QUEUE STATUS
READY	(I)	; READY
REFRQ	(O)	; REFRESH REQUEST
RESET	(I)	; RESET
RES OUT	(O)	; SYSTEM RESET
TCLK	(I)	; TIMER CLOCK
TCTL2	(I)	; TIMER CONTROL 2
TOUT2	(O)	; TIMER OUT 2
UBE	(O)	; UPPER BYTE ENABLE
X1, 2	(I)	; CRYSTAL 1,2

UPD71051GB-10-3B4 (NEC) FLAT PACKAGE

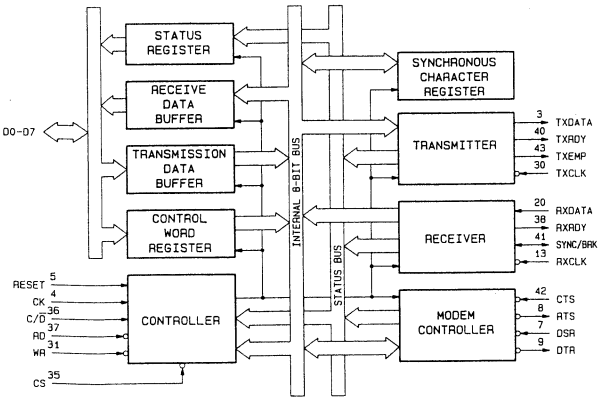
C-MOS SERIAL CONTROLLER

– TOP VIEW –



PIN NO.	I/O	SYMBOL	PIN NO.	I/O	SYMBOL	PIN NO.	I/O	SYMBOL	PIN NO.	I/O	SYMBOL
1	—	NC	12	—	NC	23	—	NC	34	—	NC
2	—	NC	13	I	RXCLK	24	—	NC	35	I	CS
3	O	TXDATA	14	—	VDD (+5V)	25	I/O	D4	36	I	C/D
4	I	CK	15	I/O	D0	26	I/O	D5	37	I	RD
5	I	RESET	16	I/O	D1	27	I/O	D6	38	O	RXRDY
6	—	NC	17	—	IC	28	—	NC	39	—	NC
7	I	DSR	18	I/O	D2	29	I/O	D7	40	O	TXRDY
8	O	RTS	19	I/O	D3	30	I	TXCLK	41	I/O	SYNC/BRK
9	O	DTR	20	I	RXDATA	31	I	WR	42	I	CTS
10	—	NC	21	—	GND	32	—	NC	43	O	TXEMP
11	—	NC	22	—	NC	33	—	NC	44	—	NC

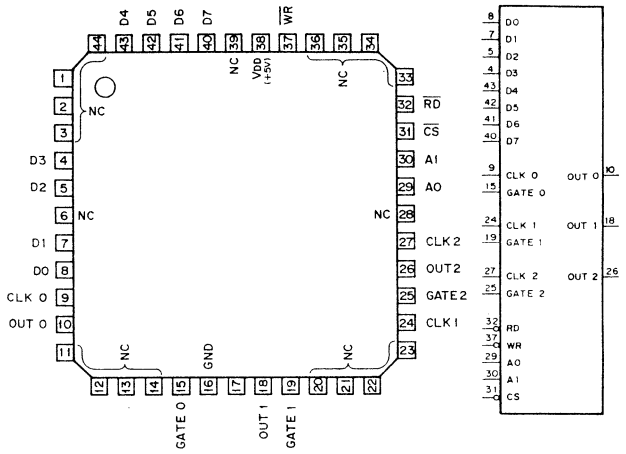
CS ; CHIP SELECT INPUT
CTS ; CLEAR TO SEND OUTPUT
C/D ; CONTROL/DATA SELECT INPUT
D0-D7 ; DATA INPUTS/OUTPUTS
DSR ; DATA SET READY INPUT
DTR ; DATA TERMINAL READY OUTPUT
TXCLK ; TRANSMITTER CLOCK INPUT
TXDATA; TRANSMIT DATA OUTPUT
TXEMP ; TRANSMITTER EMPTY OUTPUT
TXRDY ; TRANSMIT READY OUTPUT
RD ; READ STROBE INPUT
RESET ; RESET INPUT
RTS ; REQUEST TO SEND OUTPUT
RXCLK ; RECEIVER CLOCK INPUT
RXDATA ; RECEIVE DATA INPUT
RXRDY ; RECEIVER READY OUTPUT
SYNC/BRK; SYNCHRONIZATION/BREAK INPUT/OUTPUT
WR ; WRITE STROBE INPUT



UPD71054GB-10-3B4 (NEC) FLAT PACKAGE

C-MOS PROGRAMMABLE TIMER COUNTER

– TOP VIEW –



FUNCTION TABLE

INPUTS					FUNCTION
CS	RD	WR	A1	A0	
0	1	0	0	0	COUNTER NO. 1 WRITE
0	1	0	0	1	COUNTER NO. 2 WRITE
0	1	0	1	0	COUNTER NO. 3 WRITE
0	1	0	1	1	CONTROL WORD WRITE
0	0	1	0	0	COUNTER NO. 1 READ
0	0	1	0	1	COUNTER NO. 2 READ
0	0	1	1	0	COUNTER NO. 3 READ
0	0	1	1	1	NO-OPERATION (HI-Z)
1	X	X	X	X	DISABLE (HI-Z)
0	1	1	X	X	NO-OPERATION (HI-Z)

A1,A0 ; SELECTED READ/WRITE OPERATION
CLK n ; COUNTER CLOCK INPUT n
CS ; CHIP SELECT
D7-D0 ; 8-BIT DATA I/O
GATE n; COUNTER GATE INPUT n
IC ; INTERNALLY CONNECTED
OUT n ; COUNTER CLOCK OUTPUT n
RD ; READ COUNTER/STATUS
WR ; WRITE COMMAND/DATA

0;LOW LEVEL
1;HIGH LEVEL
X;DON'T CARE
HI-Z;HIGH IMPEDANCE

CONTROL WORD FORMAT

D7	D6	D5	D4	D3	D2	D1	D0
SC1	SC0	RWM1	RWM0	CM2	CM1	CM0	BCD

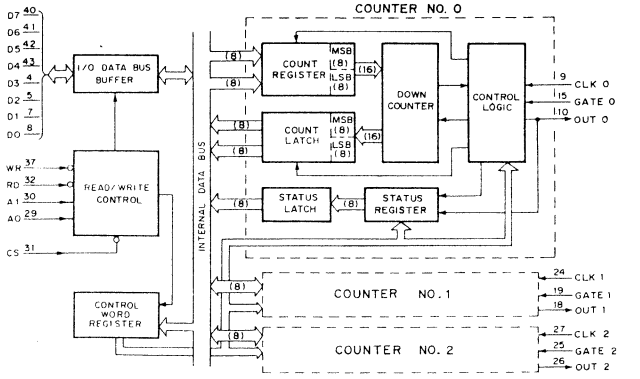
BCD : BINARY CODED DECIMAL

BCD	COUNTER OPERATION
0	16-BIT BINARY COUNT
1	4-FIGURE BCD COUNT

CM2	CM1	CM0	COUNTER MODE
0	0	0	MODE 0
0	0	1	MODE1
X	1	0	MODE 2
X	1	1	MODE 3
1	0	0	MODE 4
1	0	1	MODE 5

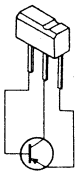
RWM1	RWM0	READ/WRITE MODE
0	0	COUNTER LATCHING CMD.
0	1	LSB ONLY
1	0	MSB ONLY
1	1	LSB FIRST THEN MSB

SC1	SC0	OPERATION
0	0	SELECTED COUNTER No.0
0	1	SELECTED COUNTER No.1
1	0	SELECTED COUNTER No.2
1	1	MULTIPLE LATCH COMMAND



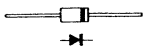
TRANSISTOR

(SCALE 2/1)

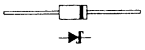


2SB822

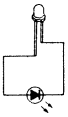
DIODE



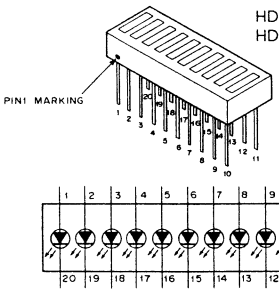
1SS119



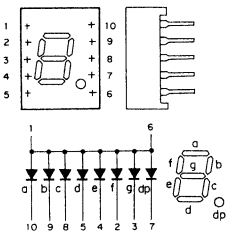
ERA81-004



GL-3HY8 ; YELLOW
TLG123A ; GREEN
TLR123 ; RED
TLY123 ; YELLOW



HDSP-4840 ; RED
HDSP-4850 ; GREEN



HDSP-7501 ; RED

SECTION D
REPLACEABLE PARTS

D-1. PARTS ORDERING INFORMATION

Standardization of Parts

Repair parts supplied from Sony Parts Center may not be always identical with the part which actually in use due to "accommodating the improved parts and/or engineering changes" or "standardization of genuine parts".

This manual's exploded views and electrical parts list are indicating the parts numbers of the "standardized genuine parts at present".

Parts marked with S in the column of SP

These parts are normally stocked as replaceable parts.

Parts marked with O in the column of SP

Orders for these parts will be processed, but allow for additional delivery time.

Parts without Part No.

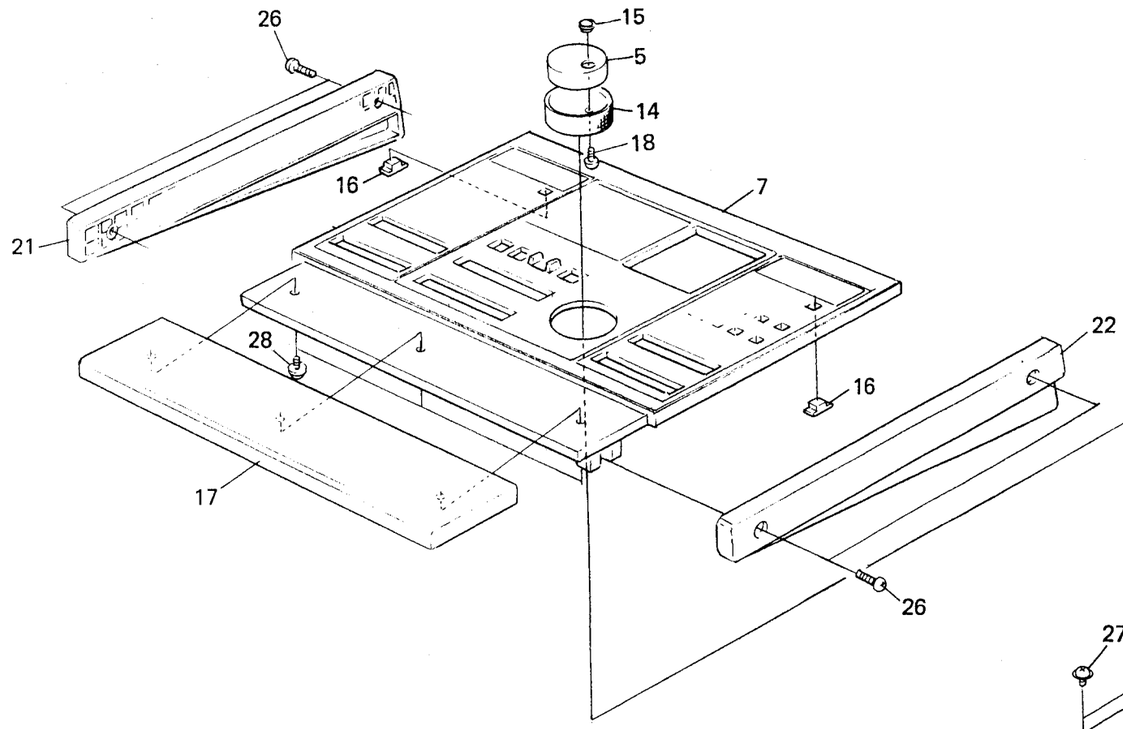
These parts are not stocked because they are seldom required for routine service.

> The components marked with ⚠ are critical to safe operation.
> These components must be replaces with the same ones as described on the Parts List.

D-2. EXPLODED VIEWS AND PARTS

Index No.	Parts No.	SP	Description
1	A-7850-774-A	o	COMPLETE PCB, DP-122
2	A-7850-776-A	o	COMPLETE PCB, DP-123
3	A-7850-778-A	o	COMPLETE PCB, KC-22
4	X-2068-004-0	s	TERMINAL ASSY
5	X-3165-311-1	o	DIAL(LARGE) ASSY
6	X-3165-312-3	o	PLATE ASSY, BOTTOM
7	X-3165-485-3	o	PANEL ASSY
8	1-413-595-11	s	SWITCHING REGULATOR
9	1-466-469-11	s	ROTARY ENCORDER
10	1-466-470-11	s	KEYBOARD UNIT
11	1-946-794-11	o	HARNESS(9P)
12	1-946-970-11	s	HARNESS(PSW) (Up to Serial No. J:10040, UC:20025, EK:50065)
	1-946-970-13	s	HARNESS (PSW) (Serial No. J:10041 and higher, UC:20026 and higher, EK:50066 and higher)
13	2-068-008-00	s	WASHER
14	3-166-883-01	s	COVER, DIAL
15	3-166-884-01	s	DIAL(SMALL)
16	3-166-886-01	s	KEY TOP
17	3-167-747-01	o	CUSHION, PANEL
18	3-668-009-02	s	PIN, PUSH BUTTON
19	3-673-910-00	o	SCREW, CONNECTOR
20	3-679-627-00	s	LEG
21	4-923-974-01	o	PLATE(LEFT),SIDE,ORNAMENTAL
22	4-923-975-01	o	PLATE(RIGHT),SIDE,ORNAMENTAL
23	7-682-546-09	s	SCREW + B3x5
24	7-682-549-09	s	SCREW + B3x10
25	7-682-560-04	s	SCREW + B4x6
26	7-682-562-09	s	SCREW + B4x10
27	7-682-903-11	s	SCREW + PWH3x6
28	7-682-904-01	s	SCREW + PWH4x6

RM-D7300


26
15
5
14
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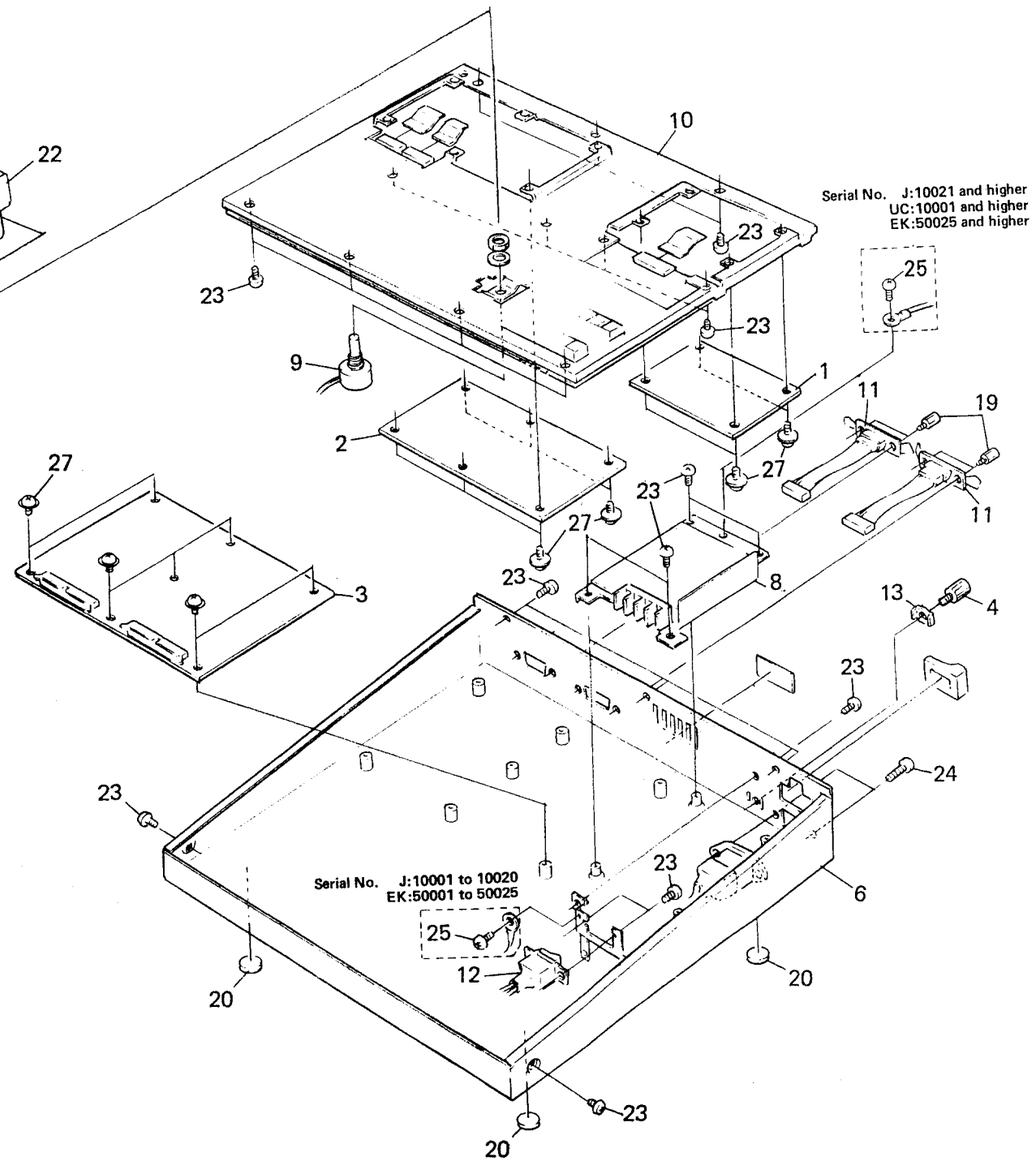
17
26


10
Serial No. J:10021 and higher
UC:10001 and higher
EK:50025 and higher
23
25
23
23
9
1
11
19
2
27
11
27
23
27
23
8
3
13
4
23
24
23
Serial No. J:10001 to 10020
EK:50001 to 50025
6
25
23
12
20
20
20
23

D-3. ELECTRICAL PARTS LIST

STANDARDIZED PARTS LIST

Replacements for capacitors and resistors not given in each board parts lists are shown below.
If a capacitor with the desired working voltage is not found, choose one of higher working voltage.

CAPACITOR, CHIP CERAMIC

Part No.	SP	Description			
1-163-097-00	s	CAP, CHIP CERAMIC	15pF	5%	50V
1-163-038-00	s	CAP, CHIP CERAMIC	0.1		50V

RESISTOR, CHIP

Part No.	SP	Description			
1-216-001-00	s	RES, CHIP	10	5%	1/10W
1-216-025-00	s	RES, CHIP	100	5%	1/10W
1-216-029-00	s	RES, CHIP	150	5%	1/10W
1-216-033-00	s	RES, CHIP	220	5%	1/10W
1-216-041-00	s	RES, CHIP	470	5%	1/10W
1-216-049-00	s	RES, CHIP	1k	5%	1/10W
1-216-053-00	s	RES, CHIP	1.5k	5%	1/10W
1-216-057-00	s	RES, CHIP	2.2k	5%	1/10W
1-216-073-00	s	RES, CHIP	10k	5%	1/10W
1-216-083-00	s	RES, CHIP	27k	5%	1/10W

DP-122 BOARD

Ref. No. or Q'ty	Part No.	SP	Description
1pc	A-7850-774-A	o	COMPLETE PCB, DP-122
(This assembly includes the following parts.)			
CN1	1-562-686-11	o	CONNECTOR, F.P.C (26P)
D1	8-719-984-43	s	DIODE HDSP-7501#S02
D2	8-719-984-43	s	DIODE HDSP-7501#S02
D3	8-719-984-43	s	DIODE HDSP-7501#S02
D4	8-719-984-43	s	DIODE HDSP-7501#S02
D5	8-719-984-43	s	DIODE HDSP-7501#S02
D6	8-719-984-43	s	DIODE HDSP-7501#S02
D7	8-719-984-43	s	DIODE HDSP-7501#S02
D8	8-719-984-43	s	DIODE HDSP-7501#S02
D9	8-719-984-43	s	DIODE HDSP-7501#S02
D10	8-719-984-43	s	DIODE HDSP-7501#S02
D11	8-719-984-43	s	DIODE HDSP-7501#S02
D12	8-719-938-68	s	DIODE GL3HY8
D13	8-719-938-68	s	DIODE GL3HY8
D14	8-719-938-68	s	DIODE GL3HY8
D15	8-719-938-68	s	DIODE GL3HY8
S1	1-570-106-11	s	SWITCH, TACT

DP-123 BOARD

Ref. No. or Q'ty	Part No.	SP	Description
1pc	A-7850-776-A	o	COMPLETE PCB, DP-123
(This assembly includes the following parts.)			
CN1	1-562-686-11	o	CONNECTOR, F.P.C (26P)
CN2	1-562-686-11	o	CONNECTOR, F.P.C (26P)
D1	8-719-984-43	s	DIODE HDSP-7501#S02
D2	8-719-984-43	s	DIODE HDSP-7501#S02
D3	8-719-984-43	s	DIODE HDSP-7501#S02
D4	8-719-984-43	s	DIODE HDSP-7501#S02
D5	8-719-984-43	s	DIODE HDSP-7501#S02
D6	8-719-984-43	s	DIODE HDSP-7501#S02
D7	8-719-984-43	s	DIODE HDSP-7501#S02
D8	8-719-984-43	s	DIODE HDSP-7501#S02
D9	8-719-984-43	s	DIODE HDSP-7501#S02
D10	8-719-984-43	s	DIODE HDSP-7501#S02
D11	8-719-984-43	s	DIODE HDSP-7501#S02
D12	8-719-938-68	s	DIODE GL3HY8
D13	8-719-938-68	s	DIODE GL3HY8
D14	8-719-938-68	s	DIODE GL3HY8
D15	8-719-938-68	s	DIODE GL3HY8
D16	8-719-984-43	s	DIODE HDSP-7501#S02
D17	8-719-984-43	s	DIODE HDSP-7501#S02
D18	8-719-984-43	s	DIODE HDSP-7501#S02
D19	8-719-984-43	s	DIODE HDSP-7501#S02
D20	8-719-984-43	s	DIODE HDSP-7501#S02
D21	8-719-984-43	s	DIODE HDSP-7501#S02
D22	8-719-984-43	s	DIODE HDSP-7501#S02
D23	8-719-984-43	s	DIODE HDSP-7501#S02
D24	8-719-984-43	s	DIODE HDSP-7501#S02
D25	8-719-984-43	s	DIODE HDSP-7501#S02
D26	8-719-984-43	s	DIODE HDSP-7501#S02
D27	8-719-984-43	s	DIODE HDSP-7501#S02
D28	8-719-979-26	s	DIODE HDSP-4840
D29	8-719-979-26	s	DIODE HDSP-4840
D30	8-719-979-26	s	DIODE HDSP-4840
D31	8-719-984-41	s	DIODE HDSP-4850-S22
D32	8-719-984-41	s	DIODE HDSP-4850-S22
D33	8-719-984-41	s	DIODE HDSP-4850-S22
D34	8-719-979-26	s	DIODE HDSP-4840
D35	8-719-979-26	s	DIODE HDSP-4840
D36	8-719-979-26	s	DIODE HDSP-4840
S1	1-570-106-11	s	SWITCH, TACT

NOTE : Please see pages D-7 for the parts that are not listed in the parts list.

KC-22 BOARD

Ref. No. or Q'ty	Part No.	SP	Description
1pc	A-7850-778-A	o	COMPLETE PCB, KC-22
(This assembly includes the following parts.)			
1pc	1-526-662-21	s	SOCKET, IC (DP) 40P
1pc	1-540-080-11	s	SOCKET, IC (IC113) 68P
3pcs	4-924-029-11	s	WASHER
BT1	1-528-229-11	o	BATTERY, LITHIUM CR-2450
BZ1	1-529-025-00	s	BUZZER
C1	1-163-227-11	s	CERAMIC 10PF 5% 50V
C2	1-163-227-11	s	CERAMIC 10PF 5% 50V
C3	1-163-227-11	s	CERAMIC 10PF 5% 50V
C4	1-163-227-11	s	CERAMIC 10PF 5% 50V
C5	1-163-227-11	s	CERAMIC 10PF 5% 50V
C6	1-163-227-11	s	CERAMIC 10PF 5% 50V
C7	1-163-227-11	s	CERAMIC 10PF 5% 50V
C8	1-163-227-11	s	CERAMIC 10PF 5% 50V
C9	1-163-263-11	s	CERAMIC 330PF 5% 50V
C10	1-125-447-11	s	DOUBLE LAYERS 1FARAD 5.5V
C13	1-163-127-00	s	CERAMIC, CHIP 270PF 5% 50V
C14	1-163-263-11	s	CERAMIC 330PF 5% 50V
C15	1-163-109-00	s	CERAMIC, CHIP 47PF 5% 50V
C18	1-126-096-11	s	ELECT 10uF 20% 35V
C19	1-124-584-00	s	ELECT 100uF 20% 10V
C100	1-124-584-00	s	ELECT 100uF 20% 10V
CN1	1-560-358-11	o	CONNECTOR POST HEADER,ILG (4P)
CN2	1-506-475-11	s	CONNECTOR, 10P, MALE
CN3	1-506-475-11	s	CONNECTOR, 10P, MALE
CN4	1-506-792-11	o	HEADER 60P
CN5	1-506-792-11	o	HEADER 60P
D1	8-719-981-01	s	DIODE ERA81-004
D2	8-719-981-01	s	DIODE ERA81-004
D3	8-719-981-01	s	DIODE ERA81-004
D4	8-719-981-01	s	DIODE ERA81-004
D5	8-719-981-01	s	DIODE ERA81-004
D6	8-719-812-32	s	DIODE TLY123
D7	8-719-812-31	s	DIODE TLR123
D8	8-719-920-05	s	DIODE SLP281C-50
D9	8-719-911-19	s	DIODE 1SS119
D10	8-719-911-19	s	DIODE 1SS119
D11	8-719-911-19	s	DIODE 1SS119
D12	8-719-911-19	s	DIODE 1SS119
D13	8-719-911-19	s	DIODE 1SS119
D14	8-719-911-19	s	DIODE 1SS119
D15	8-719-911-19	s	DIODE 1SS119
D16	8-719-911-19	s	DIODE 1SS119
ICA6	8-759-151-38	s	IC CXD8141Q
ICA8	8-759-207-07	s	IC TD62381P
ICB4	8-759-151-04	s	IC UPD43256AGU-10LL
ICB8	8-759-207-07	s	IC TD62381P
ICC2	8-759-929-77	s	IC SN74LS03NS
ICC3	8-759-925-85	s	IC SN74HC32ANS
ICC6	8-759-151-38	s	IC CXD8141Q
ICC8	8-759-207-07	s	IC TD62381P
ICD2	8-759-927-46	s	IC SN74HC00ANS
ICD3	8-759-926-11	s	IC SN74HC138ANS

NOTE : Please see pages D-7 for the parts that are not listed in the parts list.

(KC-22 BOARD)

Ref. No. or Q'ty	Part No.	SP	Description
ICD4	8-759-151-04	s	IC UPD43256AGU-10LL
ICE2	8-759-926-80	s	IC SN74HC573BNS
ICE3	8-759-926-11	s	IC SN74HC138ANS
ICE6	8-759-926-76	s	IC SN74HC540ANS
ICE7	8-759-926-76	s	IC SN74HC540ANS
ICE8	8-759-207-07	s	IC TD62381P
ICF2	8-759-926-49	s	IC SN74HC245ANS
ICF3	8-759-926-49	s	IC SN74HC245ANS
ICF4	8-759-062-16	s	IC 27C2048-KC22V2.01
ICG2	8-759-926-80	s	IC SN74HC573BNS
ICG3	8-759-926-80	s	IC SN74HC573BNS
ICG6	8-759-926-77	s	IC SN74HC541ANS
ICG7	8-759-926-76	s	IC SN74HC540ANS
ICG8	8-759-207-07	s	IC TD62381P
ICH6	8-759-505-32	s	IC CXD8186Q
ICH7	8-759-149-10	s	IC UPD4702G
ICJ3	8-759-151-34	s	IC UPD70216L-10
ICJ8	8-759-207-07	s	IC TD62381P
ICK4	8-759-149-07	s	IC UPD71054GB-10-3B4
ICK5	8-759-926-76	s	IC SN74HC540ANS
ICK8	8-759-207-07	s	IC TD62381P
ICL3	8-759-925-74	s	IC SN74HC04ANS
ICL5	8-759-926-56	s	IC SN74HC273ANS
ICM1	8-759-008-57	s	IC MC34051P
ICM3	8-759-989-91	s	IC TL7705ACPS
ICM4	8-759-149-05	s	IC UPD71051GB-10-3B4
ICM5	8-759-207-07	s	IC TD62381P
ICM7	8-759-151-38	s	IC CXD8141Q
ICM8	8-759-207-07	s	IC TD62381P
Q1	8-729-205-95	s	TRANSISTOR 2SA1428-Y
Q2	8-729-205-95	s	TRANSISTOR 2SA1428-Y
Q3	8-729-205-95	s	TRANSISTOR 2SA1428-Y
Q4	8-729-205-95	s	TRANSISTOR 2SA1428-Y
Q5	8-729-205-95	s	TRANSISTOR 2SA1428-Y
Q6	8-729-205-95	s	TRANSISTOR 2SA1428-Y
Q7	8-729-205-95	s	TRANSISTOR 2SA1428-Y
Q8	8-729-205-95	s	TRANSISTOR 2SA1428-Y
R19	1-216-055-00	s	METAL, CHIP 1.8K 5% 1/10W
R22	1-249-482-11	s	CARBON 4.7 5% 1/2W
RB1	1-231-410-00	s	RESISTOR BLOCK 10Kx8
RB2	1-231-410-00	s	RESISTOR BLOCK 10Kx8
RB3	1-231-410-00	s	RESISTOR BLOCK 10Kx8
RB4	1-231-410-00	s	RESISTOR BLOCK 10Kx8
RB5	1-231-410-00	s	RESISTOR BLOCK 10Kx8
RB6	1-231-410-00	s	RESISTOR BLOCK 10Kx8
S1	1-552-539-00	s	SWITCH, TACTILE
S2	1-570-623-11	s	SWITCH, DIP 8-CKT
X1	1-577-110-11	s	VIBRATOR, CRYSTAL
X2	1-567-862-11	s	CRYSTAL, 4.9152MHZ

FRAME

Ref. No. or Q'ty	Part No.	SP	Description
[BASE ASSY]			
-	⚠1-413-595-11	s	SWITCHING REGULATOR(FAW05-3RO)
-	1-535-321-11	o	TERMINAL, SOLDERLESS
	1-560-372-00	o	TERMINAL, SOLDERLESS
	1-561-516-00	o	CONNECTOR HOUSING, ILG (4P)
-	⚠1-570-117-21	s	SWITCH, SEESAW (AC POWER)
-	1-946-794-11	o	HARNESS (9P)
-	⚠1-946-970-11	s	HARNESS (PSW) (Up to Serial No. J:10040, UC:20025, EK:50065)
	⚠1-946-970-13	s	HARNESS (PSW) (Serial No, J:10041 and higer, UC:20026 and higer, EK:50066 and higer)
[KEY BOARD ASSY]			
-	1-466-469-11	s	ROTARY ENCORDER (MAGNETIC)
-	1-466-470-11	s	KEYBOARD UNIT

D-4. ACCESSORIES SUPPLIED

Ref. No. or Q'ty	Part No.	SP	Description
1pc	⚠1-557-377-11	s	CORD, POWER(For UC)
1pc	⚠1-534-754-00	s	CORD, POWER(For J)
1pc	⚠1-590-910-11	s	CORD, POWER(For EK)
2pcs	1-555-873-13	o	CABLE, REMOTE CONTROL 9P
1pc	3-677-503-00	s	SHEET, PROTECTION

NOTE : Please see pages D-7 for the parts that are not listed in the parts list.

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